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Contents

SCIENTIFIC ARTICLES

43 Role of the computer in continuing medical education
Dr. Edward N. Brandt, Jr.

49 Can we prevent drug abuse in industry?
Dr. Arthur H. Briggs

57 Delivering health care to domestic farm workers
Dr. Walter D. Campbell

62 Freud and cancer
Dr. Charles T. Brown

69 Prescription for tax record keeping
Mr. Fred Darwin

77 Injuries peculiar to traffic accidents: Seat belt syndrome, laryngeal fracture, hangman's fracture
Dr. Lee F. Rogers

84 Anesthesia for trauma: Is blood alcohol level a factor?
Dr. James F. Lee,
Dr. Robert J. Samuelson,
Dr. Thomas D. Watson,
Dr. A. H. Giesecke, Jr.

EDITORIALS

130 Practicing physicians need lifelong education

130 Physician needs freedom to prescribe as he thinks best
Dr. James H. Sammons

134 Phase IV controls affect hospitals
Dr. Charles B. Dryden

FEATURES

88 A perspective of Korea
Dr. Robert L. Rock

92 Orient Adventure
Dr. Howard M. Burkett
Dr. Ed W. Schmidt

96 Group travel popular among MDs
C. Lincoln Williston

NEWS

6 PSRO areas proposed by DHEW

8 Dr. Levin recommended for UTMB presidency

8 AMA actions

11 RMPT continues

13 TV reaches poor

13 Library fund passes $10,000

13 Rehab report

14 Annual Session highlights

14 Expert witness survey

15 Assistant exam in pediatrics

15 PKU program

18 Federal welfare program

18 MECO deadline

23 DPW proposes compensation agreement

23 Med schools graduate record number

24 PSRO study

24 VD in male homosexuals

DEPARTMENTS

25 Capital Comments

28 Information for Authors

33 Coming Meetings

99 Medicine and the Law

101 Personals

101 Medicine in Literature

103 Recent Deaths

D1-D24 1974 Texas Continuing Education Directory for Physicians

ON THE COVER

Coming to you in a plain brown envelope is the 1974 Directory of Continuing Education Courses for Texas Physicians. You'll find it at the back of the book, pages D1-D24. There are 156 courses listed under 29 major subjects, and to make things even easier the directory also includes a calendar index of the courses. In addition, there is a list of medical meetings to be held in Texas during 1974. Throughout the year, when you think of continuing education, think of the *Texas Medicine* issue that looks like a big brown envelope. Inside, you're sure to find the right course, at the right time, and in the right place for you.

NEXT MONTH

February's scientific articles will be on masked epilepsy, surgery for rheumatoid arthritis, extraskeletal chondrosarcoma, velopharyngeal incompetence, cortical bone grafts, retinal detachment following congenital cataract surgery, unusual complication of stasis dermatitis, and initial responses to grief.

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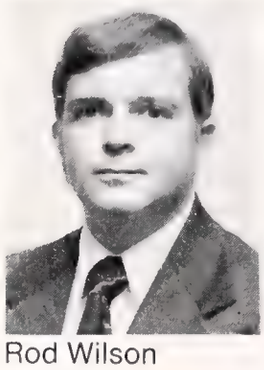
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NEWS

PSRO area designations proposed by DHEW

The Department of Health, Education and Welfare (DHEW) released Dec 18 the proposed area designations for Professional Standards Review Organizations (PSROs) across the United States. Under the proposed regulations, Texas will be divided into eight PSRO areas. (See map at right.)

In addition, the Office of Professional Standards Review (OPSR) of DHEW has published guidelines limiting the activities of state medical organizations to assistance, advice and support for states with multiple PSRO areas.

The total number of proposed PSRO areas nationally is 182. The proposed regulations designate 28 states as single PSRO areas and 25 states as multiple areas. Eight states have eight or more PSRO designations with California having the largest number, 21, followed by New York with 14.

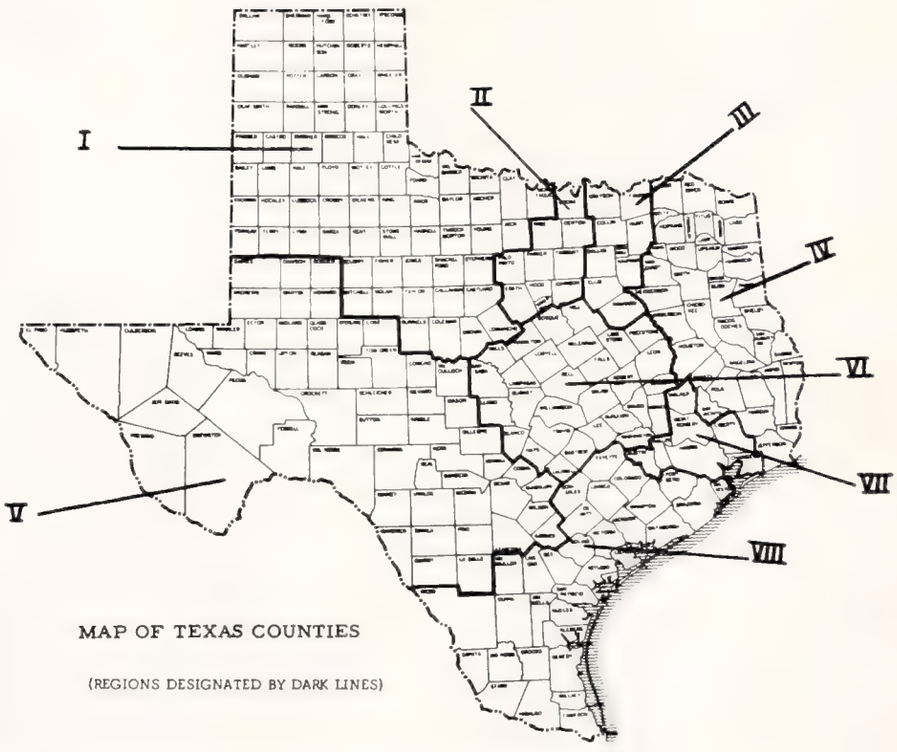
The publication of these proposed area designations in the *Federal Register* is not a final action, but a notice of intent. In a letter to county medical society executives in Texas, Dr. Joseph T. Painter, chairman of the steering committee of the Texas Institute for Medical Assessment (TIMA), said there is an intensified information program underway requesting the active support of individual physicians via letters to congressmen and DHEW urging the adoption of the single-state PSRO program rather than the DHEW area designations for the state. Dr. Painter said a continuing firm position on the part of the medical profession in Texas in support of the TIMA program could still cause the adoption of the single contract for PSRO in Texas.

In reiterating its solid support for the single area designation for Texas ,TIMA's steering committee enumerated the principles of a statewide PSRO. These include: 1) multiple small geographically contiguous local review units with autonomy for review decisions; 2) medical service review areas related to the type of review to be performed; 3) education to improve medical care as the end product; 4) centralized data and managerial system; and 5) provider direction for development of PSRO.

Polls of physicians, institutions, and other providers will be conducted

by TIMA to determine the attitudes within the medical community toward the concept of PSRO, the TIMA plan, and the DHEW program.

This culminating activity will bring to the attention of Congress and the national level of DHEW the policy positions of TMA on PSRO and the TIMA proposal.



MAP OF TEXAS COUNTIES

(REGIONS DESIGNATED BY DARK LINES)

The TIMA steering committee has prepared a ten-page comparison of the differences between the TIMA proposal and the OPSR proposal. This analysis was sent to each member of the Texas congressional delegation for review and consideration. Commenting on this document, TIMA officials stated that the TIMA plan effects a simpler, more flexible, more economical, and more organized approach for guaranteed uniform statewide implementation with well defined provider determined medical service areas and with the full support of all components of the medical care delivery system. The major points of contention in the comparison were listed as the determination of prime contractor, area designation, and level at which certification of due process is made.

Technical amendments to PSRO regulations to permit large states to be designated as single PSROs, preventing the exclusion on the basis of physician numbers have been advanced to the Conference Committee of the US House of Representatives and US Senate.

Each Texas physician is urged to voice his opinion on this important subject by writing his individual congressman; the state's senators, Lloyd Bentsen and John Tower; Dr. Henry Simmons, acting director of OPSR; Dr. Charles Edwards, assistant secretary of health, DHEW; and Caspar Weinberger, DHEW secretary.

NEWS

Dr. Levin recommended for UTMB presidency

Chancellor Charles A. LeMaistre of The University of Texas System has announced he will recommend Dr. William C. Levin as the next president of The University of Texas Medical Branch at Galveston, effective Sept 1, 1974.

Dr. Levin, a UTMB graduate, is presently professor of internal medicine and Warmoth professor of hematology of that institution. He will succeed Dr. Truman G. Blocker, Jr., who will retire Sept 1 and assume the duties of president emeritus of UTMB.

Dr. Levin was recommended by both the Faculty-Student Advisory Committee, and the Selection Committee appointed by the chairman of the Board of Regents.

Chancellor LeMaistre said his recommendation will go to the Board of Regents at its Feb 1 meeting. Chief administrative officers of component institutions of the UT System are appointed by the Chancellor and require approval by the Board of Regents.

Dr. Levin has been the director of the hematology division at UTMB and medical director of the John Sealy Hospital Blood Bank since 1946. He is also director of the Clinical Research Center at UTMB, a position he was named to in 1952. Dr. Levin has held numerous positions of responsibility, including chairmanship of the Cancer Clinical Investigation Review Committee of the National Cancer Institute, National Institutes of Health, and chairmanship of the planning committee of the NCI Review Committee. He is the recipient of numerous scholastic honors and serves on various educational and medical boards.

AMA delegates consider 148 agenda items

In addition to the action taken on the four Texas resolutions (see article in December *Texas Medicine*), the AMA House of Delegates elaborated on its policy position on Professional Standards Review Organizations (PSROs) as well as numerous other issues of concern to physicians and the public during the recent 27th AMA Clinical Convention in Anaheim, Calif.

The House acted on 67 reports and 81 resolutions for a total of 148 items of business, the largest agenda for a clinical session in recent years. Issues considered ranged from malpractice problems to proposed improvements in health care delivery of migrant workers, and the method of election —and terms of service—of members of the Board of Trustees.

A total of ten resolutions concerning the PSRO law were introduced during the session, more than for any other item of business, indicating the high degree of concern over the issues surrounding PSRO and professional peer review.

In regard to the PSRO issue, the AMA House affirmed the principle that the medical profession remain firmly committed to the principle of peer review under professional direction, and that medical society programs of proven effectiveness should not be dismantled by PSRO implementation. The House determined that action should be taken to inform the public and legislators of the AMA view with the hope that Congress will respond by repeal, modification or interpretation of rules which will protect the public.

In other actions, the House adopted a report which outlines the continuance of AMA efforts to secure balanced funding for medical education and research. Also adopted was a resolution that offers the American Hospital Association the cooperation of the AMA in deliberations on the AHA's Quality Assurance Program.

The House adopted a report which recommends that the present National Intern and Resident Matching Program remain in effect. Other action items included the approval of the development of a possible nationwide health insurance program for migrant

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The Texas delegation presented four resolutions for consideration by the AMA House of Delegates during the December meeting in Anaheim. (American Medical Association photo by Joe Fletcher.)

workers. Another resolution called for the improvement of the medical treatment and hospital admission of alcoholics.

The House adopted the concept of the proposed AMA plan to implement the government's National Blood Policy by organizing blood banks and transfusion facilities within a national system that retains regional and local responsibilities and authority.

Among other miscellaneous actions was the adoption of a report recommending that summaries of court decisions on informed consent be made available to physicians on request, rather than the compilation of model guidelines since court interpretations of informed consent vary from one jurisdiction to another.

Regional Medical Program continues operations

The Regional Medical Program of Texas is continuing operations as a result of extended legislation and a partial release of appropriated funds by the Nixon Administration.

RMPT was originally scheduled for phase-out June 30, 1973, with complete shutdown by Oct 31.

From a funding award received in October, 11 program activities are currently being funded in addition to staff and administrative costs. A program request has been submitted to Regional Medical Programs Service (RMPS) for the January-June 1974 period for review. RMPS has assured all RMPs that every effort will be made to continue their operations through this period.

Activities currently being funded include a health care needs and remedies analysis, a feasibility study of resort area health care and finance analysis, coordination of RMP-initiated manpower studies, information studies for implementation of local quality assurance studies, continuing education for registered nurses providing community health services, occupational analysis in selected health career fields, and a project APACHE support study.

Other activities include an emergency medical services planning guide for small communities, RMPT's statewide coordinated comprehensive renal program, and the development of methodology and procedures for maximal exercise testing programs in community hospitals.

RMPT is assisting the Texas Medical Foundation in the publication and distribution of a list of medical problem terminology. TMF and TMA cooperated this year in a study of the state's allied health personnel needs by conducting a survey of the approximate 12,000 non-federal Texas physicians. The report of this study will be issued by RMPT in early 1974.

RMPT also cooperates with TMA in the distribution of the annual continuing education directory contained in this issue.

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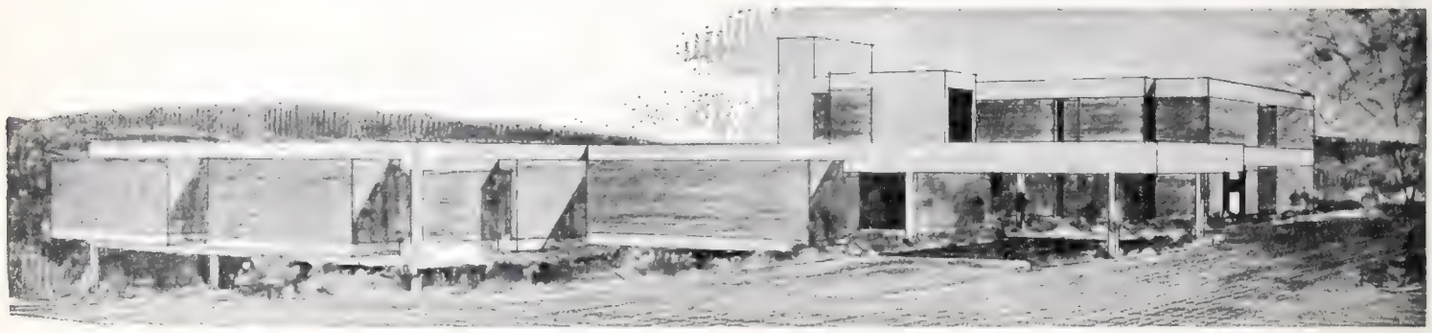

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A toxicity manual, published by The University of Texas Medical Branch at Galveston will be distributed to hospital emergency rooms through the support of RMPT.

The extended regional medical program legislation allows for evaluation of RMPs in future federal health programs. Legislation is currently being considered to preserve important elements of the RMP process as part of a program combining health planning, facilities review, and program implementation. According to RMPT director, David K. Ferguson, RMPT and its grantee, Texas Regional Medical Program, Inc., will probably have an opportunity to evaluate their participation in some kind of reshaped health program.

Television successful in reaching poor

An unusual approach to the problem of identifying hereditary diabetes has proven quite successful in Starr and Hidalgo counties of the state.

The program, devised by Dr. Mario Ramirez of Roma, centers on the use of television.

At the outset of the project, one-minute TV commercials were broadcast in both Spanish and English encouraging persons to visit a local physician within 30 days for free diabetes testing.

Because of the generations of intermarriage in the area, the incidence of hereditary diabetes is a health problem of immense proportions. More than 200 people responded in the first three weeks of the 4 week television campaign. Only 15 persons had been tested during the month prior to the Oct 15 start of the project.

While only a small experimental project, several important factors have been demonstrated which possibly could be applied in affecting other health problems in other parts of the country. The response to television has been very good as compared to reading material. The majority of the Hidalgo-Starr counties' residents, although poor, do have and watch television. In addition, it was found that the people responding to the free testing offer, which was open to everyone, were those who could not afford to go to a private physician.

In his efforts, Dr. Ramirez, who is also chairman of TMA's Committee on Health Care for the Poor and a member of the Council on Tax-Financed Health Care Programs, had the full support of TMA, the Texas State Department of Health, and the Hidalgo-Starr County Medical Society. Approximately 90% of the society's general and family practitioners and internists participated in the program.

TMA library fund passes $10,000

The Pauline Duffield Library Development Fund passed the $10,000 mark in December.

The TMA Board of Trustees established the Fund during the 1973 annual session as a "living memorial" to Pauline Duffield who has devoted more than 20 years of service to the Association and the library.

Miss Duffield said that the interest from the invested fund will be used to purchase library materials that will be of benefit to the most doctors. One possibility under consideration is the supplementation and expansion of the TMA library's audio-visual capacity.

Miss Duffield expressed the hope that the Fund will continue to grow in order to provide additional library services to physicians.

Rehabilitation commission issues report

A total of 25,868 individuals in Texas obtained gainful employment as the result of rehabilitation programs during the fiscal year 1972-73, according to the *Report to the Governor* recently issued by the Texas Rehabilitation Commission.

This total was the highest in the na-

NEWS

tion for a general program during the fiscal year.

Statistics from the agency's creation in 1969 through fiscal 1973 reflected a 50% increase in the total count of handicapped persons served. In addition, the report noted that rehabilitant costs were substantially cut over the past two years despite across-the-board salary increases and inflationary pressures.

Client earnings from referral to closure increased from $15 million to $94 million during the last year.

The Texas Rehabilitation Commission began operation as a separate agency after being transferred from the Texas Education Agency.

Breakfast highlights for 1974 Annual Session

From infant nutrition to marital counseling, there is something for everyone's curious spirit and quest for knowledge at the 1974 TMA Annual Session in Houston, May 9-12.

Topics and speakers for the continental breakfast presentations cover a broad spectrum of medical interests. Seven different presentations are scheduled for Friday and eight for Saturday.

Friday's selection features such topics as "The Doctor as a Witness," "Hypertension," "The 'Sick' Physician," "Current Concepts in Burn Management," and others.

Saturday's topics include "Blood Component Therapy, 1974," "Depression in the Newborn," "Brittle Diabetes," and several more.

Among the highly qualified speakers scheduled for the breakfast presentations are Drs. Harold L. Engel (also LLB), member, Bonne, Jones and Bridges, Los Angeles; Jay Y. Gillenwater, chairman, Department of Urology, University of Virginia Medical School, Charlottesville; Gerald G. Hirschberg, associate clinical professor of physical medicine and rehabilitation, University of California School of Medicine at San Francisco; John E. Hoopes professor of plastic surgery, The Johns Hopkins University School of Medicine, Baltimore; Edward T. Krementz, professor of surgery, Tulane University School of Medicine, New Orleans; William L. Morgan, Jr., professor and associate chairman, Department of Medicine, University of Rochester School of Medicine; and Rogers J. Smith, Council on Mental Health, AMA, Portland.

Also scheduled are Drs. David L. Barclay, professor and chairman, Department of Obstetrics and Gynecology, University of Arkansas School of Medicine, Little Rock; Buris R. Boshell, medical director, Diabetes Research and Education Hospital, Birmingham; Douglas W. Huestis, professor of pathology, University of Arizona College of Medicine, Tucson; Kevin M. McIntyre, assistant professor of Medicine, Harvard Medical School, Boston; Wil B. Nelp, professor of medicine and radiology, director, Division of Nuclear Medicine, University of Washington School of Medicine, Seattle; Richard D. Sautter, Department of Thoracic and Cardiovascular Surgery, Marshfield Clinic, Marshfield, Wis; Donald G. Langsley, professor and chairman, Department of Psychiatry, University of California School of Medicine, Davis; Charles E. Pope, II, chief, Gastroenterology Service, Veterans Administration Hospital, associate professor of medicine, University of Washington School of Medicine, Seattle; Nathan J. Smith, professor of pediatrics, University of Washington School of Medicine, Seattle; and others.

Foundation to survey expert witnesses

The Forensic Science Foundation is conducting a federally sponsored research project to define and evaluate the various services performed by the forensic science profession in the criminal justice process.

Physicians are asked if, since 1972, they have given reports or testimony

in criminal court or elsewhere in the criminal justice process as an expert witness, to mail a card or note to the Foundation giving their name, address, and area of expertise. The Foundation will mail each respondent a short questionnaire designed to group his type and degree of involvement with other individuals who have similar expertise.

All names, addresses and questionnaires will be kept confidential.

Cards should be mailed to: Forensic Sciences Foundation, 11400 Rockville Pike, Rockville, Md 20852.

Medical assistant exam offered in pediatrics

A specialty certification examination in pediatrics will be offered for the first time in 1974 by the American Association of Medical Assistants (AAMA), in cooperation with the American Academy of Pediatrics.

The deadline for applications for the general certification examination as well as the new pediatric classification is Feb 1. The one-day written exam will be given June 28 at more than 70 test centers throughout the country.

Certification is available in two regular categories: administrative, which tests competency in office managerial, secretarial, and clerical duties; and clinical, which relates to medical and laboratory principles and procedures. The new pediatric certificate will designate those who successfully demonstrate knowledge of that particular specialty.

As of June, 1973, there were 1210 assistants who had earned the CMA designation.

Certain eligibility requirements are established for employed medical assistants and for medical assisting students and instructors who wish to take the examination. Further information may be obtained from the American Association of Medical Assistants, 1 E Wacker Dr, Chicago, Ill 60601.

PKU screening program completes 10th year

The end of 1973 marks the completion of the 10th year of the combined voluntary and statutory screening program for phenylketonuria (PKU) under the coordination of the Texas State Department of Health.

While this congenital defect strikes only one in 15,000 infants born in the state, the consequences of the disease may be devastating.

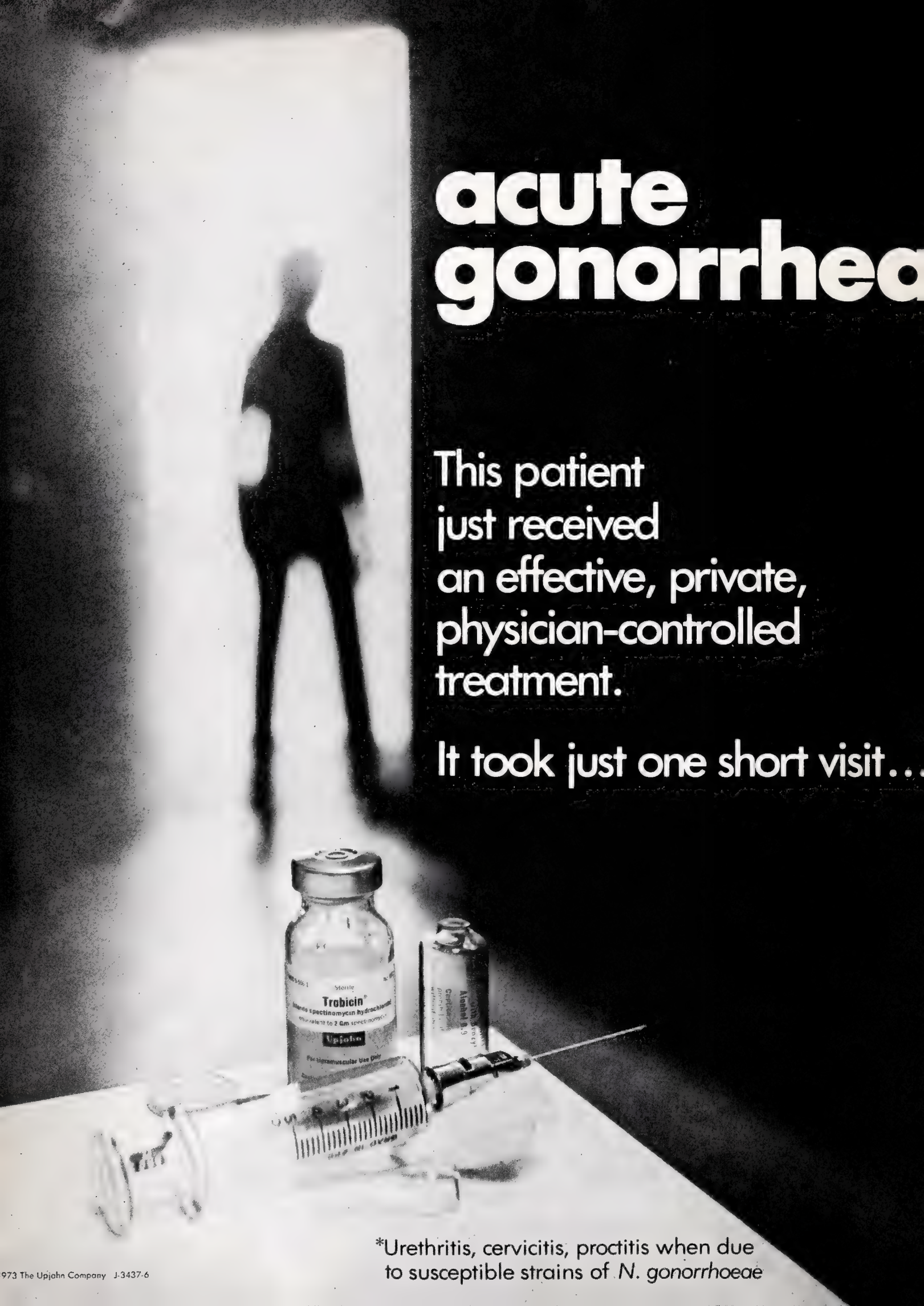
Several years ago the 58th Legislature passed an appropriations bill, supported by TMA, which provided funds for case finding, diagnosis, medical care, purchase of dietary supplement as prescribed by the physician, and follow-up treatment or home care of PKU victims.

In the PKU screening program, the Texas State Department of Health provides PKU testing filter papers to physicians, hospitals, clinics, and local health departments throughout Texas. These services are available to the hospital and medical professions upon request to the Department's Division of Maternal and Child Health.

The test requires only a few drops of the newborn infant's blood collected on a filter paper and sent to a laboratory for testing. Often, a second test is recommended to be certain of the absence of PKU, especially if the infant was discharged from the hospital before he or she had enough protein intake for a valid blood screening test. Confirmation of PKU requires chemical testing of a specimen of whole blood.

The supplementary diet for a PKU infant may also be requested from the Health Department by the infant's physician.

In the years it has been operating, the PKU screening program, with the enlisted cooperation of local private and public health resources, has successfully identified at least 65 PKU victims. The early diagnosis of these victims, coupled with early treatment in the form of a regulated low phenyla-



*Urethritis, cervicitis, proctitis when due to susceptible strains of *N. gonorrhoeae*

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Trobicin—The aspect of privacy.
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Trobicin—Indication and dosage.
Spectinomycin is indicated only for use in acute urethritis and proctitis in the male and acute cervicitis and/or proctitis in the female when due to susceptible strains of *N. gonorrhoeae*. The usual dosage for Trobicin in adult males is 2 grams intramuscularly†; 4 grams intramuscularly in females.

Trobicin—Not effective for syphilis.
Trobicin is not effective for any stage of syphilis. Trobicin may mask or delay the symptoms of incubating syphilis. If concurrent syphilis is suspected, follow the patient serologically for at least 3 months. Patients with syphilis should receive adequate specific anti-syphilitic therapy with an appropriate antibiotic.
Trobicin is contraindicated in patients previously found hypersensitive to it.

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An aminocyclitol antibiotic active *in vitro* against most strains of *Neisseria gonorrhoeae* (MIC 7.5 to 20 mcg/ml). Definitive *in vitro* studies have shown no cross resistance of *N. gonorrhoeae* between spectinomycin and penicillin.

Indications: Acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

Contraindications: Contraindicated in patients previously found hypersensitive to spectinomycin.

Warnings: Not indicated for the treatment of syphilis. Antibiotics used to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Patients should be carefully examined and monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected.
Safety for use in infants, children and pregnant women has not been established.

Precautions: The usual precautions should be observed with atopic individuals.
Clinical effectiveness should be monitored to detect evidence of development of resistance by *N. gonorrhoeae*.

Adverse reactions: The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.
During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single- and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

Dosage and administration: Keep at 25° C and use within 24 hours after reconstitution with diluent.
Male—Inject 5 ml intramuscularly for a 2 gram dose. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.
Female—Inject 10 ml intramuscularly for a 4 gram dose.

How supplied: *Vials, 2 and 4 grams—with ampoule of Bacteriostatic Water for Injection with Benzyl Alcohol 0.9% w/v.* Reconstitution yields 5 and 10 ml respectively with a concentration of 400 mg spectinomycin per ml (as the hydrochloride). For intramuscular use only.
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For additional product information see your Upjohn representative or consult the package insert.

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† For patients with gonorrheal proctitis and for patients in geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams is preferred.

NEWS

lanine diet has helped avert, if not completely eliminate, mental deficiency in the identified PKU children.

Many of the children have been spared institutionalization in special schools, and while the personal, emotional impact this has had on families cannot be measured, the economic impact it has had on the state can.

According to the Health Department, children who require services in an institutional setting cost the state approximately $13 each day or some $4,750 each year. One child, institutionalized for 10 years, can cost the state nearly $48,000.

The Metabolic Clinic of the department of pediatrics at the University of Texas Medical Branch at Galveston is one of the few centers nationwide currently cooperating in a collaborative study on PKU.

230,000 welfare recipients now federal responsibility

The Social Security Administration took over the financial responsibility of approximately 230,000 Texas welfare recipients Jan 1.

The new program, Supplemental Security Income (SSI), will provide for the state's needy elderly, blind, and disabled. According to the State Department of Public Welfare, 84% of the recipients will receive a cash increase and 2% a reduction, However, those whose checks are decreased will be eligible for a continuing state aid program of social services including vendor drugs, glasses, dentures, hearing aids, medical services, home care service, and food stamps.

Welfare recipients will automatically be transferred from the state to the federal program. In addition, requirements for persons applying for aid for the first time are generally less stringent than for past welfare eligibility.

Details concerning the new program which may be of interest to physicians include the fact that recipients in nursing homes or other Title XIX medical institutions on Dec 31 will continue to receive assistance as long as they remain in the institution. Also, there is no change for persons who receive a monthly medical ID card.

Providers of medical, nursing, and institutional services are to continue billing for and receiving payment as under the DPW program.

SSI will cover and designate as "essential persons," individuals who do not qualify for assistance themselves but whose needs are included in those of qualified recipients.

A recipient receiving a Social Security check each month will continue to receive it and will also receive an additional SSI check.

With this federal assumption of the three adult categories the state retains one financial assistance program, the Aid to Families with Dependent Children.

MECO deadline Jan 30

The deadline for hospital application forms for participation in the 1974 Medical Education and Community Orientation (MECO) program of the Student American Medical Association is Jan 30.

The MECO project offers medical students the opportunity to receive a part of their education in an actual community health care system. A pre-junior or pre-sophomore student is assigned to a community hospital for a period of four to ten weeks in the summer, rotating through the clinical and non-clinical areas of the hospital, spending time in physicians' offices and being exposed to other health care facilities in the community.

The MECO project is conducted with the cooperation of TMA, the Texas Hospital Association, and the Texas Academy of Family Physicians.

This is Texas' fourth year of participa-

Texas Medical Association

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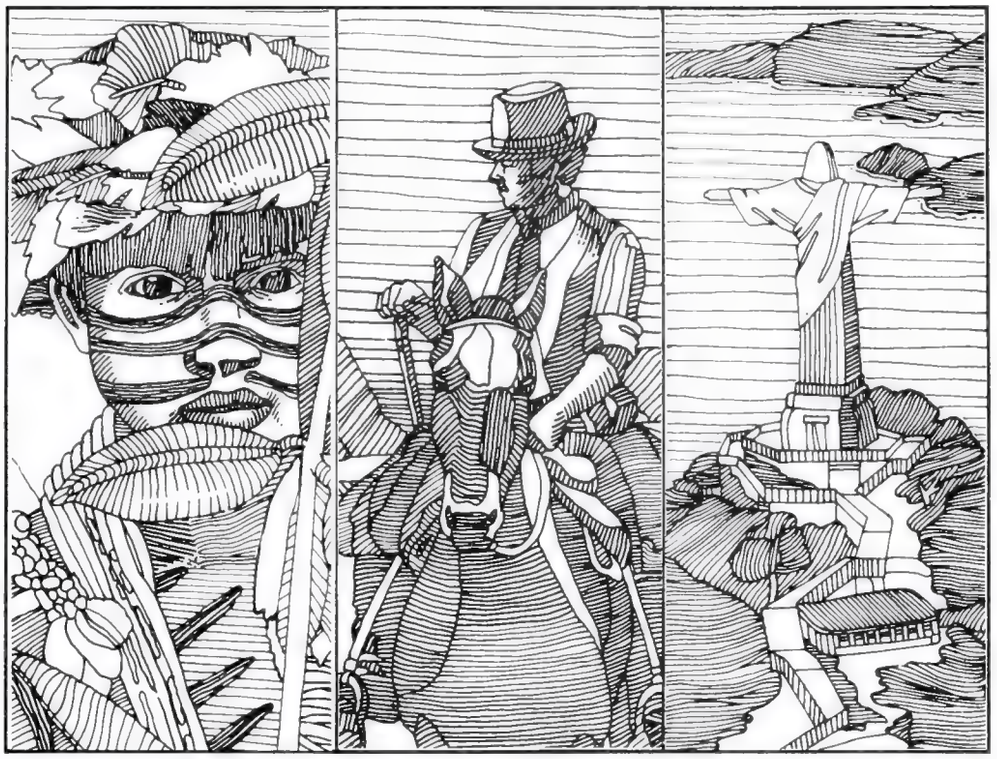

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Precautions: As with other thyroid preparations, an overdosage of SYNTHROID (sodium levothyroxine) may cause diarrhea or cramps, nervousness, tremors, tachycardia, vomiting and continued weight loss. These effects may begin after four or five days or may not become apparent for one to three weeks. Patients receiving the drug should be observed closely for signs of thyrotoxicosis. If indications of overdosage appear, discontinue medication for 2-6 days, then resume at a lower dosage level. In patients with diabetes mellitus, careful observations should be made for changes in insulin or other antidiabetic drug dosage requirements. If hypothyroidism is accompanied by adrenal insufficiency, such as Addison's Disease (chronic adrenocortical insufficiency), Simmonds's Disease (panhypopituitarism) or Cushing's syndrome (hyperadrenalism), these dysfunctions must be corrected prior to and during SYNTHROID (sodium levothyroxine) administration. The drug should be administered with caution to patient with cardiovascular disease; development o chest pains or other aggravations of cardiovas cular disease requires a reduction in dosage.

Contraindications: Thyrotoxicosis, acute myocar dial infarction. **Side effects:** The effects of SYN THROID (sodium levothyroxine) therapy are slov in being manifested. Side effects, when they dc occur, are secondary to increased rates of body metabolism; sweating, heart palpitations with or without pain, leg cramps, and weight loss Diarrhea, vomiting, and nervousness have alsc been observed. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. Careful observation of the patient during the beginning of any thy roid therapy will alert the physician to any un toward effects.

It has been shown that *Synthroid* (T_4) converts to T_3 at the cellular level to supply metabolic needs. [1, 2]

1 *Synthroid* is T_4.

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In most cases with side effects, a reduction of dosage followed by a more gradual adjustment upward will result in a more accurate indication of the patient's dosage requirements without the appearance of side effects.

Dosage and Administration: The activity of a 0.1 mg. SYNTHROID (sodium levothyroxine) TABLET is equivalent to approximately one grain thyroid, U.S.P. Administer SYNTHROID tablets as a single daily dose. In hypothyroidism without myxedema, the usual initial adult dose is 0.1 mg. daily, and may be increased by 0.1 mg. every 30 days until proper metabolic balance is attained. Clinical evaluation should be made monthly and PBI measurements about every 90 days. Final maintenance dosage will usually range from 0.2-0.4 mg. daily. In adult myxedema, starting dose should be 0.025 mg. daily. The dose may be increased to 0.05 mg. after two weeks and to 0.1 mg. at the end of a second two weeks. The daily dose may be further increased at two-month intervals by 0.1 mg. until the optimum maintenance dose is reached (0.1-1.0 mg. daily).

Supplied: Tablets: 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded, in bottles of 100, 500, and 1000. Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, U.S.P., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent. SYNTHROID (sodium levothyroxine) **for injection** may be administered intravenously utilizing 200-400 mcg. of a solution containing 100 mcg. per ml. If significant improvement is not shown the following day, a repeat injection of 100-200 mcg. may be given.

1. Braverman, L. E., Ingbar, S. H., and Sterling, K.: Conversion of Thyroxine (T_4) to Triiodothyronine (T_3) in Athyreotic Human Subjects, J. Clin. Invest. 49:855-64, 1970.
2. Surks, M. I., Schadlow, A. R., and Oppenheimer, J. H.: A New Radioimmunoassay for Plasma L-Triiodothyronine: Measurements in Thyroid Disease and in Patients Maintained on Hormonal Replacement. J. Clin. Invest. 51:3104-13, 1972.

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tion in the five-year-old program. Almost every state will be participating in 1974. During the past summer, nearly 1000 medical students in programs in 650 communities in 25 states took part in MECO. Results of the 1973 program indicated that 70% of the students would consider returning to their MECO community to practice.

Further information on the project may be obtained by writing the Texas MECO Project Director, Andy Chesson, 100 Market St, Apt 67, Galveston, Tex 77550 or Paul D. Gray, Texas Medical Association, 1801 N Lamar Blvd, Austin, Tex 78701.

DPW proposes compensation agreement

The State Department of Public Welfare has proposed, in its Medicaid Family Planning Agency Newsletter No. 2, a compensation agreement to be used between physicians and family planning agencies for services provided Medicaid patients.

The model agreement, determined by the State Department of Public Welfare to be acceptable, has been sent to members of the TMA Council on Tax-Financed Health Care Programs for comments.

The newsletter also discussed proposed guidelines issued by the Department of Health, Education and Welfare to provide clarification of Sec 236b of PL 92-603 amendments to the Social Security Act which authorizes the payment of Medicaid benefits to parties other than the provider of the medical service.

These direct payments can be made: 1) to the employer of the physician, dentist, or other practitioner if the practitioner is required as a condition of his employment to turn over his fees to his employer; or 2) where the care or service was provided in a hospital or other facility to the facility in which the care or service was provided, if there is a contractual arrangement between the practitioner and the facility whereby the facility submits the claim for reimbursement; or 3) to a foundation, plan, or similar organization which furnishes health care through an organized health care delivery system if there is a contractual arrangement between the organization and the person furnishing the service under which the organization bills for such person's services.

Texas medical schools graduate record number

A record 561 physicians were graduated from Texas medical schools in 1973.

The figures include an increase in numbers for four of the schools and the first graduating class for The University of Texas Medical School at Houston.

The number of June graduates at each school totaled as follows: UT Southwestern at Dallas, 104; UT San Antonio 101; UTMB at Galveston, 160; and Baylor College of Medicine, 111.

A group of 22 December graduates comprised the first class to receive MD degrees from UT Houston. Baylor also conducted a December commencement for students under the three year curriculum program to complete the record total for the state.

Texas Tech University School of Medicine will graduate its first class in 1974.

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NEWS

Grant to provide study of PSRO review methods

The W. K. Kellogg Foundation of Battle Creek, Mich, has awarded a grant of $1,013,376 to the Institute of Professional Standards for a two-year demonstration and operational study designed to develop and test alternate approaches to incorporating a greater emphasis on quality assessment and assurance in Professional Standards Review Organizations (PSROs).

The project is co-sponsored and conducted jointly by the American Association of Foundations for Medical Care, the American College of Physicians, the American Hospital Association and the American Society of Internal Medicine. A number of other specialty societies have endorsed this effort also.

Dr. John Gamble, chairman of the Management Committee which represents the four co-sponsoring organizations in the direction of this project, stated, "This is a major private initiative that will complement the implementation of PSRO legislation by the Department of Health, Education and Welfare."

The project will involve six demonstration and study areas to be designated through close coordination with the Office of Professional Standards Review in DHEW.

The conditional PSROs will be distributed geographically in the different regions of the United States. Tentative plans call for two statewide PSROs, two in medium-to-large metropolitan areas up to one million in population, and two primarily rural.

The expected products of this combined demonstration-evaluation are a documentation and assessment of six representative PSROs using different methods of utilization control; quality assessment related to continuing medical education, and viable means of involving representatives of the public at the appropriate levels of review.

The project will include definitive analyses and planning for the adding of ambulatory care review, including the monitoring of drug prescription. The results will be distributed for use by other PSROs still in the development stage.

VD reported among male homosexuals

According to the Texas State Department of Health there were 294 cases of syphilis reported in male homosexuals in Texas before the end of 1973.

Of 1,223 homosexual contacts investigated, 115 contacts were diagnosed and brought to treatment. This incidence represents 25% of the total male morbidity, and there is substantial evidence (from incomplete statistics) that the incidence of gonorrhea in male homosexuals is considerably greater.

Dr. M. S. Dickerson, chief of the Communicable Disease Services of the Health Department, said that homosexual males who suspect that they are infected will present themselves for medical care; but being inhibited by social stigma, rarely state their problem openly. They attempt to communicate by complaints which they believe will suggest their condition. According to Dr. Dickerson the homosexual's signals are often not perceived by the practitioner whose diagnostic horizon does not include this area. He said the crescendo rise of VD in male homosexuals mandates an increased awareness by all physicians.

The Health Department suggests that the increased use of culture methods will result in the more frequent diagnosis of gonococcal pharyngitis and/or proctitis. Culture kits are available from local health officers or directly from the Texas State Department of Health as well as from commercial sources.

Treatment of the infected male homosexual is the same as for heterosexually infected men, except that spectinomycin has been found relatively ineffective in the treatment of gonococcal pharyngitis.

CAPITAL COMMENTS

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

AUSTIN: Gov Dolph Briscoe has announced that Texas will not enter into a contract with the Department of Health, Education and Welfare relating to capital expenditure eligibility for construction of hospitals on a determination of need. He stated that the review program was not an effective method of deterring unneeded health care facility constructions, and in fact, Sec 1122 of PL 92-603 has encouraged and accelerated health care facility construction in Texas. The regulations pertaining to this section were published over a year after federal legislation was enacted. The Governor stated that the regulations expanded the statutory language and that DHEW had made the regulations retroactive to Jan 1, 1973. The Governor said there are numerous procedural provisions in these final regulations with which the review process in Texas has not and could not reasonably have been in compliance. He stated by his action, based upon his interpretation of the law which had been confirmed by DHEW, that health care facilities will be eligible for cost reimbursement for capital expenditures if the structure and staffing of facilities meet the requirements for licensure by the Texas State Department of Health and other federal Medicare, Medicaid requirements. In other words, eligibility for cost reimbursement or capital expenditures will be determined without reference to Sec 1122. Facilities which have been reviewed for a certificate of need in 1973, may proceed with their plans and be eligible for cost reimbursement for capital expenditures if the other requirements for participation are met regardless of whether a certificate of need has been issued.

WASHINGTON: The House and Senate completed negotiations and have passed a federal HMO bill. The President has signed the bill which sets up a $375 million experimental program for five years. In relationship to overriding state laws the bill provides that in the case of any entity "(1) which cannot do business as a health maintenance organization in a State in which it proposes to furnish basic and supplemental health services because that State by law, regulation, or otherwise (a) requires as a condition to do business in that state that a medical society approve the furnishing of services by the entity; (b) requires that physicians constitute all or a percentage of its governing body; (c) requires that all physicians or a percentage of physicians in the locale participate or be permitted to participate in the provisions of services for the entity, or (d) requires that the entity meets requirements for insurers of health care services doing business in that state respecting initial capitalization and establishment of financial reserves against insolvency, and (2) for which a grant, contract, loan, or loan guarantee was paid under this title or which is a

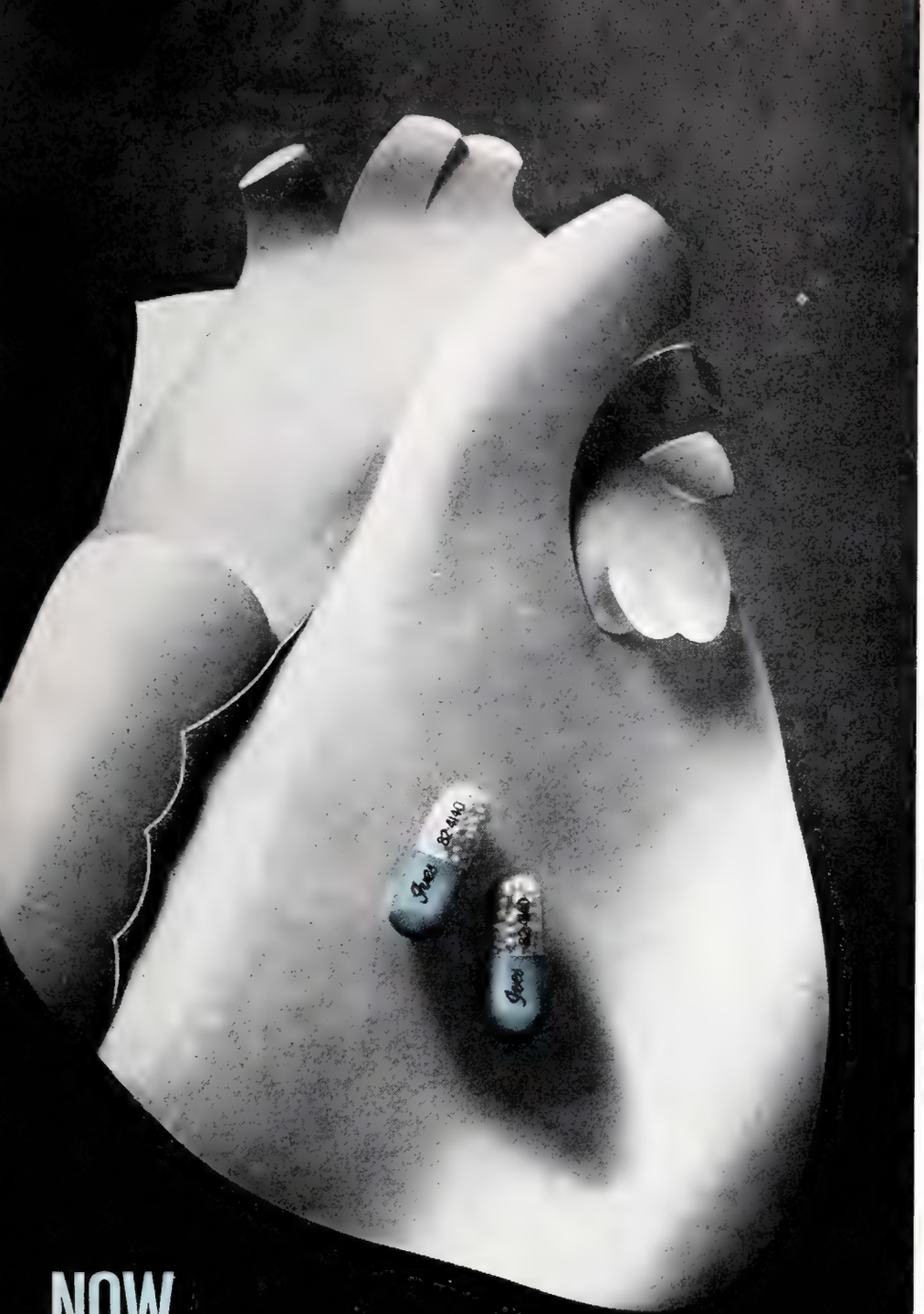
qualified health maintenance organization for purposes of Sec 1310 relating to employees health benefit plans, such requirements shall not apply to that entity so as to prevent it from operating as a health maintenance organization in accordance with Sec 1301."

AUSTIN: State Insurance Board Chairman, Joe Christie, has issued guidelines for the formation and operation of Prepaid Comprehensive Health Care Plans in Texas. Two bilateral contracts are required, one between the plan and the medical providers and one between the plan and an insurance company. The insurance company would issue an indemnity policy to the plan agreeing to pay for the designated services on a prepaid basis to the plan members.

AUSTIN: Sen A.R. (Babe) Schwartz, chairman of the Texas Senate Committee on Jurisprudence, has requested an opinion of Attorney General John Hill as to whether prepaid comprehensive health care plans of certain types constitute the transaction of the business of insurance and regulated by the Insurance Board, or whether they constitute a service and are therefore not subject to regulation by the Board.

WASHINGTON: HR 3153, which makes technical changes in PL 92-603 (which includes Sen Lloyd Bentsen's (D-Tex) and Sen Wallace Bennett's (R-Ut) amendments on PSRO), has hit a snag. The House and Senate previously voted overwhelmingly to increase the Social Security tax and benefits. The Senate ignored the House passed bill HR 11333 and acted upon HR 3153. Rep Al Ullman (D-Ore), acting chairman of the House Ways and Means Committee, stated, "It would serve no purpose to go to conference now." His committee wants the Senate to pass the House bill with its basic 11% benefit increase in its new $13,200 taxable wage base and send it to the President for signature. Later the committee would make a further detailed study of the numerous Senate amendments added to HR 3153.

AUSTIN: Governor Briscoe has announced the reappointment of Dr. James H. Sammons of Baytown to the Texas Rehabilitation Commission and the appointment of Dr. Albert H. Hartman, Jr, of San Antonio to the Texas Air Control Board.



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Information for authors

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each paper is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material.

Manuscripts should be typed double-spaced with ample margins on firm paper. Carbons are unacceptable, but the author should keep a copy.

The *title* should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

The *author's names* and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

The *text* should be narrative with complete sentences, *few abbreviations*, and logical subheading. For *spelling and usage* the editors follow "Dorland's Illustrated Medical Dictionary," 24th edition, and "Webster's Third New International Dictionary, Unabridged." *Quotations* must give credit to both author and source. A concise *introductory summary* is required.

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, top, author's name, and title of article in brief. *Legends* should be in complete sentences, numbered, and typed on a separate sheet. *Color illustrations* are authorized if they are of special value.

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All material is subject to *editing*, but authors receive typescripts to check before publication. Prompt return of typescripts to *Texas Medicine* office avoids delay in publication. After the article is sent to the printer, only minimal revision may be made.

Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Editorials should be prepared in the same general manner, and should be written in clear, concise language. They should be 300-500 words in length (about two to three pages typed with double spacing.)

Contributions to the news section should be sent to the Editorial Offices, 1801 N. Lamar Blvd., Austin 78701, by the 5th of the month preceding the month of publication.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Contributions, previously unpublished, are welcomed for review. News and other items should be sent to the Editorial Offices by the 5th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Scientific Articles are reviewed by technical and specialist consultants and are selected for publication in Texas Medicine by the Scientific Publication Committee, which is appointed by the Board of Publication. Editorials and other articles are subject to review by officers of the Texas Medical Association, appropriate expert and technical consultants, and representatives of county medical societies when in their purview.

Scientific Publication Committee: Joseph M. Abell, Jr., MD, Austin, Chairman; Robert Askew, MD, Austin, Vice-Chairman; Ronald P. Boren, MD, Austin; Ernest C. Butler, MD, Austin; Jesse D. Cone, MD, Odessa; C. W. Daeschner, MD, Galveston; George A. Gates, MD, San Antonio; Stanton W. Glazener, MD, Austin; R. Maurice Hood, MD, Lubbock; Joseph Lancaster, MD, Austin; Paul C. Peters, MD, Dallas; Richard S. Ruiz, MD, Houston; John P. Schneider, MD, Austin; H. Irving Schweppe, Jr., MD, Houston; Theodore P. Votteler, MD, Dallas.

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CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.
WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**
Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)
Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.
Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)
All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.
Tetracyclines are present in milk of lactating women taking tetracyclines.
To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.
Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).
Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**)
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.
Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.
USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.
For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.
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Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.
Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.
Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.
In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.
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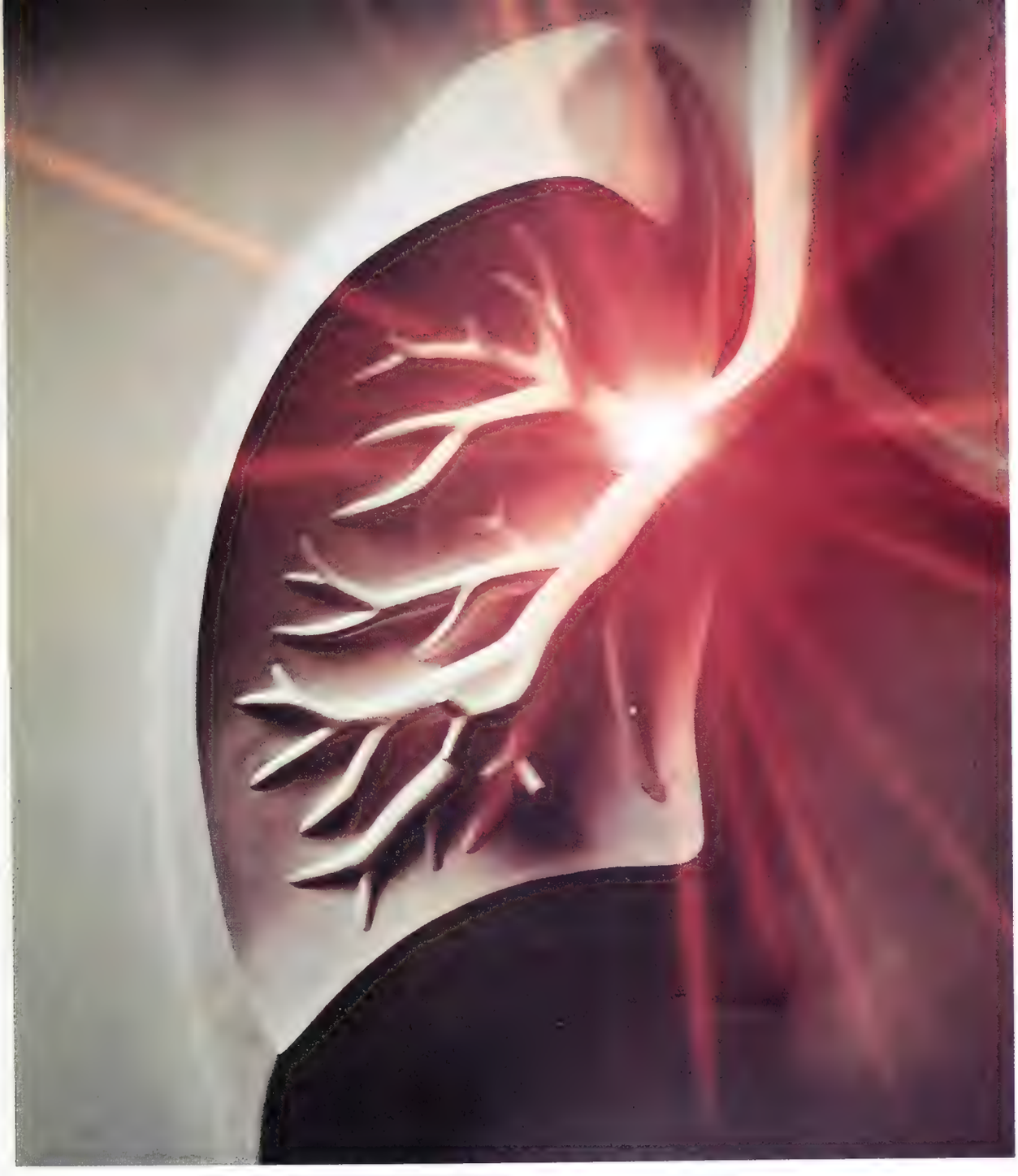

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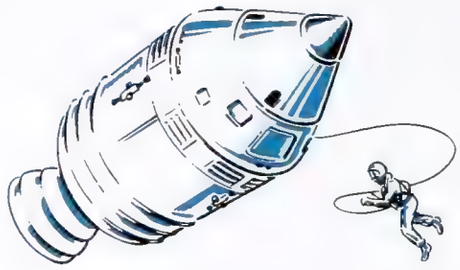

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COMING MEETINGS

AMERICAN ACADEMY OF FORENSIC SCIENCES

The 26th Annual Meeting of the American Academy of Forensic Sciences will be held at the Statler-Hilton Hotel, Dallas, Feb 12-15. The program will include such topics as use of the computer in the crime laboratory; identification of drugs; death as a legal entity; the dentist as an expert witness; use of the computer in drug enforcement; medical malpractice; and problems of ethnic identification. Scientific papers will be presented on fallacies in the signs of death; deaths due to the discharge of dropped handguns; homicides by children; and killing under the influence of LSD. The scientific exhibit will display the latest developments in laboratory equipment and systems. Contact: American Academy of Forensic Sciences, 11400 Rockville Pike, Rockville, Md 20852.

INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS

The 38th International Medical Assembly of Southwest Texas will meet at the El Tropicano Motor Hotel in San Antonio Feb 28-Mar 1. Nine scheduled speakers will lecture on the latest developments and advancements in their specialty, and exhibitors will display the newest equipment and drugs available. At the conclusion of the convention, the annual extension trip will be to Guadalajara and Puerto Vallarta, Mexico.

Contact: Mr. S. E. Cockrell, Jr., 202 W. French Pl., San Antonio 78212, Exec. Dir.

TEXAS SOCIETY OF PATHOLOGISTS

The annual meeting of the Texas Society of Pathologists will take place Jan. 25-27, at the Sheraton Fairway Motor Hotel, McAllen. The program will feature the following subjects: tumors associated with hypertension; effects of estrogens and progestational agents upon liver cells organelles; Rho gam and fetal maternal transfusions; Malakoplakia, a chronic bacterial infection; functional pathology of the cardiac conduction system; and a pathologist's view of Hirschsprung's disease.

Contact: Dr. Dorothy Patras, PO Box 1118, Fort Worth 76101.

CURRENT MEETINGS IN TEXAS

AMERICAN COLLEGE OF SURGEONS will provide eight postgraduate courses during its spring meeting in Houston Mar 25-28. Headquarters for the meeting will be the Albert Thomas Convention Center and the Hyatt Regency Hotel. Postgraduate courses will cover fluids and electrolytes; cardiovascular surgery; cancer, plastic surgery; shock; gastrointestinal surgery; surgery of the hand; and urologic surgery. For registration fees and information, contact: American College of Surgeons, 55 E. Erie St., Chicago 60611.

AMERICAN COLLEGE OF SURGEONS, South Texas Chapter, will hold its annual meeting at the Scott & White Clinic, Temple, Jan 31-Feb 2. Featured speakers and their topics are: Dr. James S. Miles, University of Colorado School of Medicine, Denver—"Chondrosarcomas are Different" and "Total Hip Arthroplasty"; and Dr. G. Rainey Williams, University of Oklahoma Medical Center, Oklahoma City—"Some Aspects of Management of Arterial Injury" and "Carcinoma of the Hepatic Ducts." Contact: Dr. Peter B. Fisher, 615 Medical Twrs, Houston 77025, Sec-Treas.

VETERANS ADMINISTRATION HOSPITAL and Baylor College of Medicine will cosponsor "The Second Intensive Course in Neuromuscular Diseases" Mar 25-27 at the Shamrock-Hilton Hotel, Houston. There is no registration fee and the course is open to all physicians and other medical personnel. Contact: Dr. William P. Blocker, Jr., Veterans Administration Hospital, 2002 Holcombe Blvd., Houston 77031.

For other courses and symposiums, see Continuing Education Directory, pp. D1-D24.

TEXAS STATE DEPARTMENT OF HEALTH will present its "24th Annual Southwestern Conference on Diseases in Nature Transmissible to Man" Mar 7-8, in Austin. Contact: Charles E. Sweet, Dr. P.H., Laboratory Services, Texas State Department of Health, 1100 W. 49th St., Austin 78756, Acting Dir.

CURRENT NATIONAL MEETINGS

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE will meet Feb 24-Mar 1 in San Francisco. Topics to be included in the program are mathematical and physical universe; living world; history, philosophy and sociology of science; health, behavior, and social processes; technology; education; science and social needs; and science and public policy. Contact: American Association for the Advancement of Science, Dept. R, 1515 Massachusetts Ave. NW, Washington, DC 20005.

AMERICAN CANCER SOCIETY, COLORADO DIVISION, presents its Annual Mid-winter Cancer Seminar Jan 30-Feb 2 at Vail Village Inn, Vail, Colo. The scientific meeting will include new information on the treatment of cancers of the colon and rectum. Special guest speakers are Dr. Russell B. Roth, president, AMA; Dr. Martin Adson, Mayo Clinic, Rochester, Minn.; and Dr. D. M. P. Thomson, McGill University, Montreal, Canada. Contact: Dr. Edward E. Tannant, Colorado Div. ACS, 1809 E. 18th Ave., Denver 80218, Pres.

AMERICAN COLLEGE OF CARDIOLOGY will present its 23rd Annual Scientific Session Feb 11-14 in New York City. The scientific sessions are oriented for the clinical cardiologist. They will be preceded by cardiac clinics which are sponsored by divisions of cardiology of seven medical schools and their affiliated teaching hospitals. Faculty includes teachers, clinicians, and investigators of cardiology in the New York area who will review advances and current problems in clinical diagnosis and medical and surgical treatment of heart disease. Contact: American College of Cardiology, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN COLLEGE OF HOSPITAL ADMINISTRATORS' 17th Congress on Administration will meet Feb 21-23 at the Palmer House, Chicago. Contact: Richard J. Stull, ACHA, 840 N. Lake Shore Dr., Chicago 60611, Pres.

AMERICAN COLLEGE OF SURGEONS' Committee on Trauma is sponsoring a seminar on life saving measures for the critically injured. The course will be held Mar 27-30 in Tampa, Fla, and is designed to increase the knowledge and skills of physicians who are first confronted with such patients in rural, suburban, and urban hospitals. The curriculum will stress established methods of assessing life-threatening injuries and their treatment. Serious head, thoracic, abdominal, genitourinary and arterial injuries will also be discussed, as well as shock due to hemorrhage, and the delayed pulmonary and renal complications of trauma. Contact: Trauma Division, ACS, 55 E. Erie St., Chicago 60611.

AMERICAN HOSPITAL ASSOCIATION's annual meeting is scheduled for Feb 3-6 at the Washington Hilton Hotel, Washington, DC. Contact: American Hospital Association, 840 N. Lake Shore Dr., Chicago 60611.

AMERICAN SOCIETY OF CONTEMPORARY OPHTHALMOLOGY announces its 1974 meeting to be held Feb 10-16 at the Fontainebleau Hotel, Miami Beach. Continuing education courses will include lectures in microsurgery of the eye. There will also be lectures and small group discussions in cataract, glaucoma, diseases of the retina and cornea, strabismus, plastic surgery, soft lens, and angiography. Contact: Miss Virginia Kendall, ASCO, 30 N. Michigan Ave., Room 1506, Chicago 60602.

ARIZONA HEART ASSOCIATION, in cooperation with American Academy of Family Physicians, will sponsor its 17th Annual Cardiac Symposium Jan 18-19, at the Scottsdale Hilton Hotel, Scottsdale, Ariz. Several topics included in the program are cyanotic congenital heart disease, medical and surgical management of angina pectoris, changing concepts in the management of myocardial infarction, and surgical procedure and results in the complicated coronary patient. Registration fee: $50. Contact: Arizona Heart Association, 1720 E. McDowell Rd., Phoenix, Ariz. 85006.

MEDICAL COMPUTER SERVICES ASSOCIATION will present "Advances in Primary Care" Feb 16-23, in Honolulu. The program is an interdisciplinary one for physicians, nurses, and administrators, focusing on recent developments in primary care delivery. Lecture sessions will include the problem-oriented record; multiphasic health testing; emergency medical services; and walk-in clinics. Registration fee is $50. Contact: Medical Computer Services Association, 1107 N.E. 45th St., Seattle 98105.

19TH CENTRAL FLORIDA MEDICAL MEETING, sponsored by Orange County Medical Society and Seminars & Symposia, Inc., will be held Jan 31-Feb 3 at Disney World, Fla. Topics on the program are urinary tract infections, significants of hematuria prostatic cancer, medical malpractice in the eyes of the law, and treatment of hypertensive emergencies. Registration fee: $150, physicians; $50, FMA members; $25, spouse. Contact: John A. Hinckley, PO Box 1537, Richmond, Va 23212, Exec. VPres.

Calendar of Listings

■ Denotes Texas Meetings

FEBRUARY

■ AMERICAN ACADEMY OF FORENSIC SCIENCES, Dallas, Feb. 13-16, 1974. Harlan L. Kimball, PO Box 302, New Hartford, Conn. 60657, Exec. Off.

■ FIRST DISTRICT MEDICAL SOCIETY, El Paso, Feb. 1-2, 1974. Dr. John Emmett, 612 University Towers, El Paso 79902, Sec.

■ INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS, San Antonio, Feb. 28-Mar. 1, 1974. S. E. Cockrell, Jr., 202 W. French Pl., San Antonio 78212.

■ TEXAS PUBLIC HEALTH ASSOCIATION, Houston, Feb. 17-20, 1974. Robert E. Monroe, 1117 W. 42nd, No. 201, Austin 78756, Exec. Sec.

MARCH

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS, San Francisco, Mar. 9-12, 1974. Robert Learmouth, 9650 Rockville Pike, Bethesda, Md. 20014.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, Las Vegas, Mar. 29-Apr. 3, 1974. Dr. Blaise F. Alfano, 675 Main St., Melrose, Mass. 02176.

AMERICAN SOCIETY FOR AESTHETIC PLASTIC SURGERY, New Orleans, Mar. 3-7, 1974. Dr. Simon Fredricks, 1103 Medical Towers, Houston 77025.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Los Angeles, Mar. 1-8, 1974. Dr. George F. Stevenson, 2100 W. Harrison St., Chicago 60612, Exec. Off.

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, Maui, Hawaii, Mar. 24-25, 1974; San Francisco, Mar. 28-29, 1974. Elaine Galasso, 1718 Gallagher Rd., Norristown, Pa. 19401.

■ DALLAS SOUTHERN CLINICAL SOCIETY, Dallas, Mar. 18-20, 1974. Robert L. Heath, 433 Medical Arts Bldg., Dallas 75201.

■ FIFTH DISTRICT MEDICAL SOCIETY, San Antonio, Mar. 1, 1974. S. E. Cockrell, Jr., 202 W. French Pl., San Antonio 78212.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, Mar. 11-14, 1974. Dr. Daniel C. Riordan, 1430 Tulane, New Orleans 70112, Pres.

■ NINTH DISTRICT MEDICAL SOCIETY, Sealy, Mar. 21, 1974. Dr. Max M. Diamond, 3332 Plainview, Pasadena 77504, Pres.

■ PRIVATE CLINICS AND HOSPITALS ASSOCIATION OF TEXAS, Houston, Mar. 21-22, 1974. Mrs. Judy Nichols, PO Box 155, Stephenville, Tex., Exec. Sec.

SOCIETY OF NUCLEAR MEDICINE, SOUTHWEST CHAPTER, Oklahoma City, Mar. 15-17, 1974. Dr. Thomas P. Haynie, 6723 Bertner, Houston 77025, Sec-Treas.

■ TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Galveston, Mar. 8-9, 1974. Dr. Dennis M. Voulgaris, 2100 N. Fulton, Wharton, Tex. 77488, Sec.

■ TEXAS RADIOLOGICAL SOCIETY, San Antonio, Mar. 21-23, 1974. Dr. Francis E. O'Neill, 1128 Nix Prof. Bldg., San Antonio 78205, Sec-Treas.

APRIL

AMERICAN ACADEMY OF FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY, Palm Beach, Fla., Apr. 20-22, 1974. Dr. Carl N. Patterson, 1110 W. Main St., Durham, NC, Exec. Off.

AMERICAN ACADEMY OF NEUROLOGY, San Francisco, Apr. 22-27, 1974. Stanley A. Nelson, 4005 W. 65th St., Minneapolis, Minn. 55435, Exec. Dir.

AMERICAN ACADEMY OF PEDIATRICS, Bal Harbour, Fla., Apr. 22-25, 1974. Dr. Robert G. Frazier, American Academy of Pediatrics, 1801 Hinman Ave., Evanston, Ill. 60204, Exec. Off.

AMERICAN ASSOCIATION OF ANATOMISTS, Cleveland, Apr. 1-4, 1974. Dr. John E. Pauly, Dept. of Anatomy, University of Arkansas Medical Center, Little Rock 72201.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Las Vegas, Apr. 22-24, 1974. William T. Maloney, AATS, 6 Beacon St., Suite 620, Boston 02108, Exec. Sec.

AMERICAN COLLEGE OF ALLERGISTS, Paris, France, Apr. 16-24, 1974. Dr. John D. Gillaspie, 2141 14th St., Boulder, Colo., Sec.-Treas.

■ AMERICAN COLLEGE HEALTH ASSOCIATION, Dallas, Apr. 2-5, 1974. James W. Dilley, 2807 Central, Evanston, Ill. 60201, Exec. Dir.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, Las Vegas, Apr. 29, 1974. Dr. Michael Newton, One E. Wacker Dr., Chicago 60601, Exec. Dir.

AMERICAN COLLEGE OF PHYSICIANS, New York, Apr. 1-5, 1974. Dr. Edward C. Rosenow, Jr., ACP, 4200 Pine St., Philadelphia 19104, Exec. VPres.

AMERICAN COLLEGE OF RADIOLOGY, New Orleans, Apr. 1-5, 1974. William C. Stronach, 20 N. Wacker Dr., Room 2920, Chicago 60606, Exec. Dir.

INDUSTRIAL MEDICAL ASSOCIATION, Miami Beach, Apr. 28-May 2, 1974. Howard N. Schulz, 150 N. Wacker Dr., Chicago 60606, Exec. Dir.

SOUTHWESTERN SURGICAL CONGRESS, Monterey, Calif., Apr. 29-May 2, 1974. Dr. Jack A. Barney, 708 Physicians & Surgeons Bldg., Oklahoma City 73103, Sec-Treas.

■ TEXAS DENTAL ASSOCIATION, Dallas, Apr. 28-May 1, 1974. Dr. Joe C. Carrington, Jr., 4920 N. Interregional Hwy., Austin 78751.

■ TEXAS UROLOGICAL SOCIETY, Fort Worth, Apr. 4-6, 1974. Dr. Hugh Lamensdorf, PO Box 11340, Fort Worth 76109, Sec.

MAY

AEROSPACE MEDICAL ASSOCIATION, Washington, DC, May 6-9, 1974. Dr. Merrill H. Goodwin, ASMA, Washington National Airport, Washington, DC 20001, Exec. Sec.

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, TEXAS CHAPTER, Houston, May 1974. Dr. Byron N. Dooley, 7711 Louis Pasteur, San Antonio 78229, Pres.

AMERICAN GASTROENTEROLOGICAL ASSOCIATION, San Francisco, May 19-25, 1974. Charles B. Slack, 6900 Grove Rd., Thorofare, NJ 08086, Exec. Sec.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, Galveston, May 24-26, 1974. Geraldine Midgley, PO Box 1287, Uvalde 78801, Exec. Sec.

AMERICAN PSYCHIATRIC ASSOCIATION, Detroit, May 6-10, 1974. Dr. Walter E. Barton, 1700 18th St., NW, Washington, DC 20009, Med. Dir.

■ AMERICAN PSYCHIATRIC ASSOCIATION, TEXAS DISTRICT BRANCH, Houston, May 11, 1974. Mrs. Iris Wenzel, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

AMERICAN SOCIETY OF COLON AND RECTAL SURGEONS, Washington, DC, May 22-25, 1974. Ms. Harriette Gibson, 320 W. Lafayette, Detroit, Mich. 48226, Admin. Sec.

AMERICAN SOCIETY OF INTERNAL MEDICINE, San Francisco, May 2-5, 1974. William R. Ramsey, 535 Central Tower Bldg., Third and Market Sts., San Francisco 94103, Exec. Dir.

AMERICAN THORACIC SOCIETY, Cincinnati, Ohio, May 12-15, 1974. Robert G. Weymueller, 1749 Broadway, New York 10019, Exec. Dir.

AMERICAN UROLOGICAL ASSOCIATION, St. Louis, Mo., May 19-23, 1974. Richard J. Hannigan, 1120 N. Charles St., Baltimore, Md. 21201, Exec. Off.

■ CONFERENCE OF CITY AND COUNTY HEALTH OFFICERS, Houston, May, 1974. Dr. J. E. Peavy, Commissioner of Health, Texas State Dept. of Health, 1100 W. 49th St., Austin 78756.

■ TEXAS AIR-MEDICS ASSOCIATION, Houston, May 9, 1974. Dr. C. F. Miller, PO Box 1338, Waco 78203, Sec-Treas.

■ TEXAS ASSOCIATION OF PHYSICIANS IN NUCLEAR MEDICINE, Houston, May, 1974. Dr. Robert W. Parkey, 5323 Harry Hines, Dallas 78235, Sec.

■ TEXAS DERMATOLOGICAL SOCIETY in conjunction with Mexican Dermatological Society, Houston, May 10-12, 1974. Dr. Don W. Owens, 6624 Fannin, Houston 77025, Prog. Chrmn.

■ TEXAS DIABETES ASSOCIATION, Houston, May, 1974. Dr. Eric A. Orzeck, 918 Medical Towers, Houston 77025.

■ **TEXAS MEDICAL ASSOCIATION, Houston, May 8-12, 1974. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.**

■ TEXAS OPHTHALMOLOGICAL ASSOCIATION, Houston, May 9-12, 1974, and European tour, May 12-31, 1974. Dr. C. A. Struve, PO Box 6374, Corpus Christi 78411.

■ TEXAS ORTHOPAEDIC ASSOCIATION, Houston, May, 1974. Dr. John A. Murray, 5401 Caroline, Houston 77004, Prog. Chrmn.

■ TEXAS OTOLARYNGOLOGICAL ASSOCIATION, Houston, May, 1974. Dr. John W. Youngblood, 505 Medical Park Tower, Austin 78705, Sec.

■ TEXAS PROCTOLOGIC SOCIETY, Houston, May 9, 1974. Dr. W. Bailey, 712 N. Washington, Dallas 75246.

■ TEXAS RHEUMATISM ASSOCIATION, Houston, May, 1974. Dr. J. E. Norris, 6448 Fannin, Houston 77025, Pres.

■ TEXAS SOCIETY OF ANESTHESIOLOGISTS, Houston, May, 1974. Dr. Cecil R. Glass, 2525 Calder Ave., Beaumont 77702, Sec.

■ TEXAS SOCIETY OF ATHLETIC TEAM PHYSICIANS, Houston, May 10, 1974. Dr. Bobby L. Stafford, 8 Medical Dr., Amarillo 79106, Sec.

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Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl

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The American Academy of Dermatology

The Board of Directors of the American Academy of Family Physicians

The Executive Board of the American Academy of Neurology

The Committee on Drugs of the American Academy of Pediatrics

The American College of Allergists

The Executive Committee of the American College of Obstetricians and Gynecologists

The Board of Regents of the American College of Physicians

The Board of Trustees of the American Dental Association

The Board of Trustees of the American Medical Association

The American Psychiatric Association

The Executive Committee of the National Association of Retail Druggists

The Board of Directors of the Pharmaceutical Manufacturers Association

The National Wholesale Druggists' Association

›int Statement on Antisubstitution Laws and Regulations

The purpose of this statement is affirm the support of the participatg organizations for the laws, regulaons and professional traditions which ohibit the unauthorized substitution drug products.

Traditionally, physicians, densts and pharmacists have worked operatively to serve the best interts of patients. Productive cooperaon has been achieved through utual respect as well as a common ncern for the ideals of public rvice. This mutual respect has been flected, in part, by joint support er the years for the adoption and nforcement of laws and regulations ecifically prohibiting unauthorized bstitution and encouraging joint scussion and selection of the urce of supply of drug products. ne basic principles of medical, den- l and pharmacy practice are thus ilized and preserved in the interest patient welfare.

The antisubstitution laws have t obstructed enhancement of the ofessional status of pharmacy any ore than they have in and of themlves guaranteed absolute protecon from unsafe drugs, or freed ysicians, dentists and pharmacists om their responsibilities to patients. s a practical matter, however, such ws and regulations encourage interofessional communications regardg drug product selection and assure ach profession the opportunity to xercise fully its expertise in drug sage, to the advantage of patients.

Physicians and dentists should e urged to increase the frequency nd regularity of their contacts with harmacists in selection of quality rug products, recognizing that economies to patients can be improved through such communication, taking into account the patients' needs. The pharmacist's knowledge of the chemical characteristics of drugs, their mode of action, toxic properties and other characteristics that assist in making drug selection decisions should be utilized to the fullest extent practicable by physicians and dentists in serving their patients.

Since drug product selection entails knowledge derived from clinical experience, the physician's and dentist's roles in product selection remain primary and do not permit delegation of decisions requiring medical and dental judgments. A broader role in therapy will evolve for pharmacists as improved understanding and cooperation among the professions continue to grow.

There has been no evidence that there are convincing reasons to modify or repeal existing laws and regulations prohibiting the unauthorized substitution of another drug product for the one specified by a prescriber. It is our belief that such laws and regulations merit the joint support of the medical, dental and pharmaceutical professions and the pharmaceutical industry.

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Role of the computer in continuing medical education

Edward N. Brandt, Jr., MD

The goal of continuing education is to insure high quality patient care by maintaining the knowledge and skills of the physician. Interest in continuing medical education has grown rapidly, generated largely by the "knowledge explosion" and by the fact that more physicians recognize the difficulty of "staying up."

Status of Continuing Education

Physicians obtain their continuing education by various methods: professional society meetings, formal postgraduate courses, books, journals and other printed material, and discussions with colleagues. It is difficult to know which of these is the most important approach. Most current continuing education activities are based upon professional society meetings, although I suspect that most physicians learn by the use of books and journals.

The number of registrants in continuing education courses sponsored by medical schools has increased greatly since 1954 (Fig 1).[1] The majority of these, however, consisted of short courses that were complete unto themselves and that required the physician to learn the material in a set time frame and in a set format. Only eight courses were offered for home study by the physician.

Although a significant number of physicians do attend these continuing education courses as currently structured and there are ample opportunities to do so, little evaluation is being done of their effectiveness. We do not know whether these courses actually meet the physician's needs, are acceptable to the physician, or result in any change in his behavior or approach to the patient.

Principles

Educators have elaborated certain principles that should be incorporated into continuing education. The first was stated by John Dewey, who said that most of us live by habits since habits represent efficiency. (That is, information is incorporated so that performance is automatic without the need to rethink the entire problem.) Thus, learning involves breaking old habits and acquiring new ones—not a simple process.

The second principle is that learning depends upon our awareness of our capacities. Without awareness of deficiencies in our knowledge or skills, there is no reason to learn to change. It has been said that dissonance in clinical problem solving must be produced to convince the physician of the need to learn something new. Dissonance can be produced when the physician is presented with a patient who has an unfamiliar problem, when curiosity and new awareness are stimulated through advertising, conversations with colleagues, and other methods, or when self-assessment tests are used to reveal deficits.

Another principle is that the physician should be motivated to learn. Some approaches to motivation have included "The Physician Recognition Award" instituted by the American Medical Association, and the stipulation by the American Academy of Family Physicians that requires continuing education courses for maintenance of membership. In addition, six state medical societies, Oregon, Arizona, Pennsylvania, Massachusetts, Florida, and New Jersey now require or soon will require continuing medical education for maintenance of membership.[1] Finally, Kansas, New Mexico, and Maryland have passed legislation to permit their boards of licensure to require continuing medical education for relicen-

sure.[1] All three of these laws are permissive, not prescriptive.

In spite of recent progress, it would seem that there is dissatisfaction with continuing medical education. There are complaints from physicians. The current structure does require them to leave their practices and to learn in a format and time frame that may not meet their needs. There are few planned programs in which a physician is permitted to achieve his own learning objectives in a directed, structured way. These observations lead me to the view that the fundamental problem with continuing medical education is that it is not continuing.

Increase in
Registrations in Continuing Education
Courses Offered by Medical Schools Since 1959

Year	No. Schools Reporting	No. Registrations
1954-55	49	18,819
1966-67	65	100,822
1971-72	71	309,649

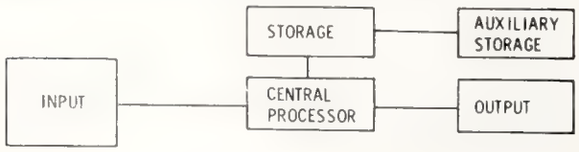
Types of Continuing Education Courses
at Accredited Institutions 1972-1973

Type	No.	% of Total
Continuous	1,510	72.4
Intermittent	470	22.5
Traineeship	65	3.1
Home study	8	0.4
Other	29	1.6
Total	2,082	100.0

These data were taken from "Medical Education in The United States, 1971-72," JAMA 222:962-1081, 1972.

1. Continuing medical education; summary of current status.

2. The functional anatomy of a modern digital computer includes these five components.



An Approach

On the basis of these principles, the following four requirements are set forth as being necessary to develop an effective continuing education program.

1. *Continuing education efforts should be a part of a defined curriculum for the physician participants.* There are two reasons for this: to insure that all necessary information and skills will be available to the physician, and to obviate unnecessary duplication of materials. We propose first that the areas of medicine essential to competence in a field be defined, and then that each physician choose areas in which he wishes to maintain his competence. In this manner, a curriculum tailor-made to the individual physician is derived. Clearly, separate curricula are needed for each of the major specialties. They could be defined cooperatively by a variety of organizations, including specialty societies, specialty boards, state medical associations, medical schools, and others.

2. *Each portion of the curriculum should have defined objectives that permit measurable evaluation. These objectives should relate to patient care.* The purpose of the evaluation is to provide feedback to the physician so that he can answer the question, "What have I learned?" If this evaluation is done over a period of time so that he can test his new knowledge against a continuing series of patients, he can determine whether that learning has been useful to him. In some circumstances, he may find that his practice, and thus his needs, have changed. The same evaluation will also provide feed-

back to the sponsors of the course. Without defined objectives, it is difficult for teachers to determine what to include and how to teach it.

3. *Each portion of the curriculum should permit the physician to begin at his level of understanding or skill, permit him to learn at his own speed and according to his own methods, and require him to participate through some form of evaluation exercise.*

4. *Each component of the curriculum should be designed to effect the greatest possible economy of time of the physician and faculty.* Although there are minimums in the time required to learn certain concepts and skills, the greatest possible economy of time should be an important standard.

The computer should play a significant role in implementing these principles. It cannot, however, be used as a substitute for good teachers.

The Computer

A computer is composed essentially of five components (Fig 2). The input and output units are the means by which humans communicate with the device. The central processor performs the desired logical and arithmetical steps and controls the sequence of operations of the computer. Storage units and auxiliary storage units are used to keep information readily available for use in the execution of commands.

The advantages of computers are first that they have large, readily accessible storage so that information is immediately available. Second, they are fast and they do not fatigue as do people. Finally, it is possible with modern computers to process several users at the same time, thereby increasing efficiency and economy.

The most obvious of the educational applications of computers to date has been for research (Fig 3). Computers have played a major role in the advancement of medical research and thus, ironically, have contributed to the increased need for continuing education. In recent years they have been used in clinical record keeping and retrieval of patient information. A particular example is tumor registries for the evaluation of the management of patients with cancer. It is possible to store the pertinent information on cancer patients and to retrieve this information in summary form, permitting oncologists to determine which treatment regimens have been most successful. Information retrieval from medical libraries is also an operating system. Pertinent references to answer clinical questions are retrieved quickly.

The fourth application is computer assisted instruction (CAI) which employs two approaches: tutorial and patient simulation. Educational record keeping is also accomplished by establishing a file of records for students within the computer. A summary of the computer file for an individual student will identify areas in which he is either weak or strong and enable him to concentrate on weaker areas. The final application has been selective dissemination of information.

Biographic Retrieval

The most successful computer aided bibliographic retrieval (Fig 4) is the MEDLINE

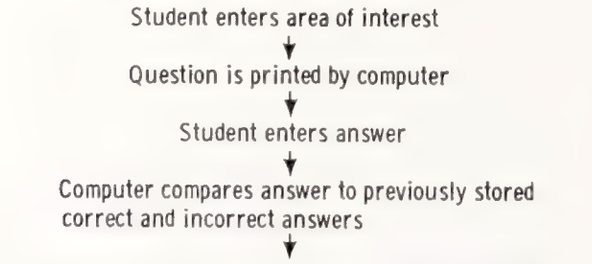
3. Current educational applications of computers.

Research computations
Clinical records and information retrieval
Library bibliographic retrieval
Computer assisted instruction
Tutorial
Patient simulation
Educational record keeping
Selective dissemination of information

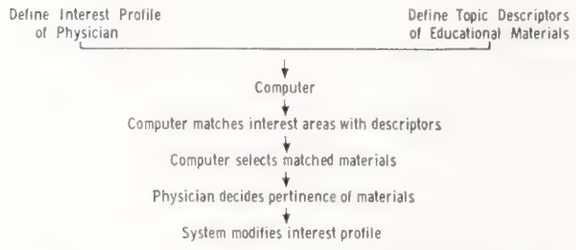
DEVELOPMENT OF INFORMATION FILE
Papers are indexed according to all pertinent descriptors.
Bibliographic information and descriptors are entered into computer.

SEARCH PROCESS
Information sought is defined and entered into computer.
Computer searches bibliographic files for descriptors to match information sought.
Computer prints list of references with matching descriptors.

4. The process of bibliographic retrieval requires the development of files and a procedure for searching them.



5. The procedure for tutorial interaction between a student and a CAI system requires a well-defined set of questions.



6. A Selective Dissemination of Information system as illustrated above can provide pertinent information on a regular periodic basis.

system from the National Library of Medicine, which is available in a number of institutions in Texas. It has been developed by indexing articles by terms that describe their content and storing the reference and the descriptions in the computer. The user defines the information that he would like to have and enters this into the computer. The computer searches the bibliographic files for the appropriate descriptors that match those given by the user. The computer prints the list of references that meet the user's specifications. The user must then obtain the articles which contain the information that he seeks. This system has been used extensively by the National Library of Medicine and has proved to be invaluable for literature search. It is necessary, however, that the user be able to define his question precisely, or he will be overwhelmed by the number of references.

Computer-Assisted Instruction

The *tutorial* type of CAI, in operation, involves a student sitting at a terminal remote from the computer (Fig 5). This terminal is usually a cathode ray type which resembles a television set with a keyboard. Typically, the student types into the computer the area of interest to him. From its storage, the computer prints a question in that area. The student ponders the question and enters his answer. The computer compares the answer to previously stored correct and incorrect answers. (The instructor designing the question would identify not only correct answers but also common incorrect answers. Each of these possible incorrect answers should indicate a particular deficit in the student's understanding of the concept being tested.) If the answer is correct, the computer states this and prints the next question. If the answer is incorrect, the

computer advises the student of the possible sources of misunderstanding and may give references that will help him overcome that deficit. Systems like this have been in operation in a number of medical schools around the country, especially Ohio State University College of Medicine, the University of Illinois College of Medicine, and Harvard Medical School.

A modification of tutorial CAI has been in use to construct self-assessment examinations. For example, the Department of Postgraduate Medical Education at the University of Wisconsin has developed a large set of questions covering the various areas of medicine.[2] Upon definition of a physician's special interests (developed from a log of his patients over a period of time), the computer prints questions that allow him to assess his knowledge of these areas. This system employs standardized questions and yet allows a unique examination to be constructed for each physician.

The second type of computer assisted instruction is patient simulation. A physician enters all of the pertinent clinical information about a patient, including a history phrased in the patient's own language. The student sits at the terminal, and "takes a history" and "performs a physical examination" by asking questions through the keyboard. He also requests pertinent laboratory and x-ray data. Then he summarizes the information given to him in response to his questions and enters his diagnosis and recommended management. The computer analyzes his responses and gives him feedback as to whether his diagnosis is accurate, whether his management is correct, and so forth. The interaction between the computer and the student can be printed and reviewed by both faculty and student to determine whether his problem solving skills are logical and appropriate. This approach takes advantage of all of the flexibility of the computer and provides the student with an opportunity to evaluate his understanding of various clinical entities rapidly. It is intended only to permit students to evaluate their problem solving abilities and not to replace experience with patients.

Selective Dissemination of Information

The goal for computer applications in continuing education should be to develop for medicine an approach that is used in industry: selective dissemination of information (SDI). SDI is a mechanism to meet identified educational needs with appropriate instructional materials on a continuing basis. Two steps are necessary. First is definition of the "interest profile" of the physician. Specifically, self-assessment techniques such as examinations, definition of the characteristics of the physician's patient population, or other means can be used to identify areas of medicine for which continuing education is needed for the individual physician. Second is definition of the substance of educational materials available. This should include bibliographic references as well as the topics contained in postgraduate courses and self-instructional packages.

The "interest profiles" and descriptors of the content of instructional materials are stored in the computer and updated regularly. Periodically, the interest profiles and descriptors are compared and educational materials corresponding to the interest areas are selected and mailed to the physician. For example, if a physician's interest profile included the management of congestive heart failure and a relevant article appeared in the literature, the SDI system would print the name of the article.

A copy of it could then be mailed to the physician (if he was not a subscriber to that journal). Each of these steps would be performed automatically if the physician were a participant in the system. Upon receipt of the article, the physician would decide whether it was pertinent to his interests, and he would so advise the system. Based on such responses, his interest profile would be modified and thus maintained current.

One approach to defining physicians' interest profiles is the "Individual Physician Profile" described by Dr. Thomas Meyer.[3] If the curriculum necessary for current knowledge in the various areas of medicine can be defined and if suitable methods for defining physicians' interest profiles can be found, some form of SDI is feasible. This development would make it possible for the physician to make efficient use of the time that he has for learning by selecting courses and self-instructional materials to meet his specific, defined needs. Although the task of implementing an SDI type system is difficult, it is an important long-range goal, because of its capacity to make the educational process truly continuing.

Summary

Modern digital computers have much to offer the educational process, especially to make education a continuing process. They must not be used as a substitute for teachers who utilize the principles of education. Although effective use of computers in education is being accomplished in some applications, their potential to meet the needs of continuing education is yet to be realized. SDI systems are a possible route to the goal, and their development should receive concerted effort in the near future.

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Can we prevent drug abuse in industry?

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Can we prevent drug abuse in industry? The answer is, "No." We do not have a drug problem; we have a people problem. The abuse of drugs by people is but one symptom of growing problems in a society which has been mainly preoccupied with producing wealth and making unbelievable progress in the advancement of physical sciences and mechanical arts. Thus, as long as industry is composed of people, there will be drug abuse in industry. Throughout ancient and modern history, man has abused drugs. While it may be possible to control drug abuse to the point where it will cease to be a major problem for industry, I am convinced that any program designed to completely eliminate drug abuse is doomed to failure.

A few definitions are in order. My definition of a "drug" is any substance which has physical-chemical effects on the body. I define "drug use" as the use of a drug for therapeutic or recreational purposes, and "drug misuse" as the inappropriate use of a drug for therapeutic or recreational purposes. "Drug abuse" is the use of any drug to the extent that it interferes with physical or mental health, and interferes with the economic or social welfare. To give an example, alcohol is a drug. When it is taken to promote social interaction at parties, this is drug use. Getting inebriated on rare occasions without hurting the individual or others is drug misuse. Becoming a chronic alcoholic is drug abuse. The same may be said for illegal drugs such as marihuana.

Who Is To Blame?

Who is to blame for the present drug dilemma? "He is," or "They are," or so we would like to believe. The fact is that *we* are to blame. We live in a drug-ridden, drug-saturated society in which we have been taught and conditioned to accept chemicals of all sorts as part of normal living. We have swallowed the industrial slogan, "Better living through chemistry." Some of the best and cleverest programs on television are commercials for drugs. "You only go around once in life"; "Try it —you'll like it"; "I can't believe I ate the whole thing!" are now standard expressions. The industry has even created a new disease which is not in medical textbooks: It is chronic, recurrent, primarily occurs on Monday mornings, and cannot be cured, but can be controlled by a drug that makes water look like champagne. This disease is called "the blahs."

Physicians may say, "Yes, that is true, they certainly have done that," but we as physicians are also to blame. The quantity of drugs available to physicians and nurses is enormous. There are more than 13,000 pharmaceutical preparations now in use, two-thirds of which have been introduced since 1950. Physicians and nurses have also swallowed the industrial slogan "Better living through chemistry." The problem is that we have too many drugs and too few physicians and nurses; Sir William Osler once stated that the insatiable desire to take medicine is the chief thing which differentiates man from the lower animal. This drug binge—desired by the patients and given by the doctor—costs over $4 billion, $300 million a year. Polydrug use by physicians, leading to multiple drug interactions and unwanted effects, has reached epidemic proportions in this country. Surveys at two leading medical centers found that 5% of all admissions were caused by drug-induced illnesses alone. Of all patients in the hospital, 10-14% got a drug reaction. This percentage jumped to about 30-35% if the patients were admitted with a drug reaction, or had a history of drug reaction. The in-

cidence of drug reactions was related to the number of drugs being taken, so that if the patients were taking less than six drugs during their hospital stay, they had less than a 5% chance for reaction. However, if they were receiving 17 drugs or more, the chance of a drug reaction rose to 40%. The average number of drugs taken during a hospital stay was 11. Patients over age 50 developed drug reactions more commonly, and the duration of hospitalization was significantly greater in patients with drug reactions. Seventy-eight percent of these reactions were dose-related toxic or side reactions. I think this indicates that physicians are having difficulties with drug misuse.

What about drug abuse? Unfortunately, physicians and health professionals are not only susceptible to drug abuse themselves, but in fact appear to be more prone to drug abuse than the general population. Drug dependency among physicians may be 10-20 times more frequent than in any class of American adults. For physicians and other health professionals, the most dangerous addicting drug is meperidine. Probably about 300 physicians become addicted to this drug each year. This drug thus cancels the output of three average sized medical schools per year. The fact that physicians and other health professionals appear to be more prone to drug dependency is interesting in light of the fact that these groups have more knowledge and information about drugs than any other groups.

What Has Been Done?

Regardless of who is to blame, and regardless of the many complex reasons why drugs are abused, the fact is that we are in a period where there has been a marked increase in the use of drugs which alter the mind and drugs which produce euphoria. Everyone is extremely concerned. When we Americans are concerned about a problem, there are several mechanisms by which we attempt to solve it. Unfortunately, the first is usually to pass a law against it. These laws usually call for stiff penalties and incarceration for violations. Thus, in the past, the main attempt to solve the drug dilemma has been to legislate severe penalties for the use of certain drugs and incarceration for the drug user. Industry's initial reaction was to use the "seek and destroy" approach. This approach utilizes a variety of techniques to seek out the drug user or abuser. This includes increasing security guards, infiltration by undercover agents, and the use of professional personnel to recognize the drug user. The "destroy" aspect comes from firing employees or turning them over to the "proper" authorities. It was felt that by seeking and destroying and, thus, weeding out the few evil people, the problem would be solved. It is obvious that this approach has not been successful.

The next things society turns to are education and research. The idea is that if we can't beat it out of them, maybe we can educate it out of them. If we can't educate it out of them, surely the researchers can find the answers and solve the problems.

Education

First, let us discuss education. There is no evidence that any educational program or programs currently being used are successful, if success is measured in terms of decreasing drug usage. No magic educational formulas will solve the drug abuse problem. There are, I believe, certain approaches that need to be pursued.

Education that is commonly used in the drug abuse area has been primarily concerned with attempting to persuade people not to use drugs by giving out information. Many of our school systems and industries have developed educational curriculums depending heavily on information about drugs. They are carefully planned to be appropriate for a given age or type of industry, and present materials and concepts on which to build. These approaches all rely on the assumption that information modifies attitudes and behavior. I suggest, however, that information, no matter how good and no matter how accurate and nonjudgmental, does not necessarily modify behavior. For example: For the American male, age 35 to 65, who smokes

a pack or more of cigarettes per day, tobacco is an environmental hazard equal to all other hazards to life combined. Is the pleasure that tobacco gives worth the price? For millions of Americans, the answer apparently is "Yes." In the face of overwhelming evidence and information that the use of tobacco is associated with tremendous debilitating illnesses and marked increase in premature deaths, men and women continue to smoke. For another example, consider what a great deterrent all of the educational aspects in the past against alcohol have been. For another, recall that physicians—well-educated and well-informed about drugs—have a high rate of drug dependence. But why? Why do people continue to smoke and drink, even when they know the serious consequences that can result? I think it is basically because people don't really care how dangerous a drug is if it fulfills some type of need for them. I suggest that, no matter how much information we give out about drugs, including marihuana and LSD, we're not going to solve the drug dilemma. Not that accurate information isn't important; it is, and in fact, part of our present problem is the credibility gap that has resulted from the giving out of false information. The one important criteria of successful communication and persuasion is that the message and the messenger be credible. Untruths, half-truths, exaggerations, overgeneralizations, and sensationalism can kill credibility. Once credibility has been shattered, doubt and distrust is all that is left. Too often, people have been called on to give out drug information who were not qualified to make evaluations themselves. Therefore, they regurgitated biased materials, most of which were slanted to scare the hell out of people! When large institutions send out people to give information, the information is usually slanted toward the growth of the institution in question. Much of the information and suggestions as to how to deal with the problem of drug abuse was given by people associated with law enforcement institutions. Naturally, emphasis was placed on information associated with drugs and crime. Scare tactics were used in an attempt to decrease the use of drugs, and most treatment and preventive programs involve stiff penalties for drug use and incarceration of the drug user.

Drug abuse education in the past has not only been ineffective, but may have actually encouraged drug use. There are some who believe that drug education founded on information rouses curiosity where none existed, and, in some cases, is actually a good lesson in how to use the drugs. Is it possible that the very information which we assume will deter drug use, actually increases its attractiveness for some individuals and some groups?

The type of education described herein suffers from ignoring several basic and important pharmacological factors about drugs. First, drugs are presented as having certain set characteristic pharmacological effects on the body. The fact which is consistently ignored is the importance of nondrug factors in influencing the effects of drugs at both low and moderate dose levels. These factors include physiological characteristics, psychological characteristics, setting, and a host of other complex phenomena.

Example: In 1970 The University of Texas Medical School at San Antonio was involved in a National Drug Abuse Training Center. During the training, we conducted a double-blind experiment involving drugs. The participants were divided into two groups: drug takers and drug evaluators. The drug takers were then divided into three groups: one group received 200 mg of sodium seconal, one group was given 10 mg of dexedrine, and the other group was given a placebo. None of the participants, evaluators, or myself for that matter, knew what the pills were. They looked and tasted alike and only the pharmacist knew what they were. The drug takers were given a series of tests of mentation involving serial sevens and backward-forward digits, and checked a symptom list. At various intervals after receiving the drug, they tried to determine what kind of a drug they had received. The participants could not differentiate between a sleeping pill and a stimulant, and many of them reacted to placebo. The experiment brought out that

the effects of a certain type of drug may not be specific in certain individuals and depends upon a variety of complex factors. This also holds true for the illegal drugs such as marihuana and LSD. Another factor that has been ignored is the dose-response relationships. That is, certain people will react to a drug at very low doses and others only at higher doses. In addition, the higher the dose necessary to produce an effect, the more likely one is to see unwanted responses. Furthermore, most drugs at high doses may produce a nonspecific toxic psychosis which includes hallucinations. Overlooking these facts has led to many erroneous conclusions. For example, marihuana has been classified recently under federal laws as an hallucinogenic agent. This not an accurate classification. At very high doses the active ingredient in marihuana, 9-THC may produce hallucinations. This is not true of lower doses, and the hallucinations are probably the result of a nonspecific toxic reaction. True hallucinations probably are not produced by smoking marihuana except perhaps in rare cases. It is probable that the hallucinations reported with marihuana use are illusions. The difference is that hallucinations are sense perceptions not based on objective reality, while illusions are false interpretations of real sensory images. (The pink elephant climbing the wall is a hallucination, but the perception of a small cup as a large cup is an illusion.) Hallucinations represent much more serious disruption of normal brain function than illusions. Thus, classifying marihuana as a hallucinogenic drug not only ignores the dose response relationships, but leads to erroneous conclusions as to its possible dangers.

Another fact that is overlooked is that when one discusses the effects of drugs, whether it be therapeutic effect or unwanted reactions, one must always talk in terms of probabilities. Most drug education programs imply that the unwanted effects will be experienced by every person taking the drug. It is important to point out that if one person in 1 million has a specific type of reaction, the risk is entirely different than if one in ten persons has that reaction.

Possible positive values of the drugs in question usually are ignored. Will a discussion of the positive values of drugs, including illegal drugs, lead to increased use? I propose that all drugs have positive and negative values. Is the production of a relaxed euphoric state a positive value in the moderate use of marihuana? Is the use of alcohol in moderation for social interaction a positive value? Is the use of LSD for introspective insight into one's own psyche in certain individuals a positive value? Should education concern itself only with the negative aspects, or should there also be a frank, honest discussion of the positive values of frequently abused drugs?

Another basic difficulty that has caused confusion is the tendency to generalize and not to define our terminology so that each of us knows what the other is talking about. In the past we have applied the term "narcotic" to all socially disapproved drugs. This has led to confusion, especially in the case of marihuana. The term has implied that marihuana should be placed in the same category as drugs such as morphine and heroin. It is obvious that marihuana is not a narcotic. Each drug must be judged separately. In 1965, the Expert Committee on Drug Dependence of the World Health Organization made a valiant effort to clarify the terminology of addiction. They recommended that we drop the terms "addiction" and "habituation," which have confused many issues, and talk about drug dependency and discuss each drug on its own value. These excellent recommendations have had little effect on the lay public or legislature. We still hear people calling all illegal drugs "dope" or "narcotics," implying the risks are all equal.

The pertinent question is, "Does education in fact, of any type, have an effective role in the area of drug abuse?" I believe it does, but only if it is the type of education which is directed at the basic problem—the people problem. I think that educational endeavors in the field of drug abuse should be people-oriented rather than drug-oriented, because education di-

rected toward the symptoms rather than the causes will be of no lasting value and ultimately may do more harm. I feel that the proper education should not neglect information, but should assume that information does not influence behavior until it is processed by the individual. It would place more emphasis on the meaning and function of drug use than on the physiological effects of drugs as pharmacological agents.

Evaluating drug abuse educational programs is important. Few programs being used have been and are being critically evaluated for their effectiveness. I know of two attempts in high schools to critically evaluate the effect of drug abuse programs on drug usage. One was in Dallas where the program was in a large high school. It was a student-run seminar. Group process with trained group process leaders was used. The student leaders were also taught to be group leaders. The program lasted for three days. The pattern of drug use was evaluated before and two weeks after the program, and there was no significant change. Another study, in California, was a one-shot deal with a religious frenzy type appeal of ex-drug addicts. The students were asked whether they felt it was a worthwhile program. The first day a majority thought it was, but in the next four to five days they rapidly changed their minds about it and thought it was a fraud. I believe we must make a serious effort to evaluate educational procedures so that we will be able to continuously gather information as to where we're going and how fast we're getting there, or nowhere. I believe that industry also should attempt to evaluate their drug abuse programs.

Alternatives

Allan Y. Cohen has said that the reason people take drugs is because they *want to,* and the only time they will stop taking drugs is when they *want to* stop. He thinks that people will only stop taking drugs if they can find positive alternatives which can be just as satisfying or more so.

My philosophy is based on the concept that we need to seek out workers' needs—psychological, physiological, and sociological—and relate these to ongoing industrial programs. We need to establish lines of communication not only with employees and employers, but with families, parents, and friends, and create a basis of positive understanding and guidelines. Here is what I believe drug abuse prevention programs in industry should include:

1. Provision for educational and orientation service for industrial physicians and nurses to assist in handling general psychiatric (a people problem) as well as drug abuse problems.
2. Educational and orientation service for supervisory personnel, to aid in early recognition of drug abuse.
3. A consulting service to company physicians and management for the evaluation and rehabilitation or referral of drug abusers.
4. Provisions for research into possible adverse influences on the morale and productivity of employees not abusing drugs.
5. Development of relationships with community agencies concerned with the welfare of employees.
6. An information and education program for employees, to provide accurate, factual information about the drugs of abuse. Additionally, company security agents should be trained to recognize "pushers" and other aspects of drug procurement on company premises.
7. Train group leaders, and set up small groups, to include workers' families, parents, and friends.
8. Utilize community resources to help.
9. Use the workers to design programs.
10. Open lines of communication between employers and employees.
11. Develop programs offering positive alternatives. These programs can include athletics, health training, sensory awareness training, group therapy, social-interpersonal counseling, confidence training, memory training, instruction in appreciation of art, music, drama, study of ethics, nonchemical methods of spiritual development, brain wave training, etc.

In research, we need studies on acute and long-term pharmacological and patho-

logical effects on the body. Equally important, however, is to do research in the sociological and psychological aspects of drug use. Ultimately, I believe that through research we will reach a point where we will be much better able to control the use of drugs, but it won't happen tonight, tomorrow, or next year. Nevertheless, the effort must be started on a large scale now if we are going to get some of the answers in the future.

All of us have been deeply concerned about the drug dilemma, but I believe some exciting things are going to emerge out of all this mess. The main stream of our society for years has been willing to overlook all the signs of serious sociological problems. The drug dilemma has now confronted all levels of our society. The problem is no longer "theirs," but "ours." It is making society ask important questions. We are now questioning our entire educational system, we are questioning our goals, we are asking how to learn to communicate and listen. I believe we will ultimately see unbelievable accomplishment in man's relation to man.

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Delivering health care to domestic farm workers

Walter D. Campbell, MD

The physical and mental health of migratory farm workers and their families is in a state of devastation considered by many to be worse than that of any other group in America. Despite numerous and variable efforts directed at correcting this reality, the health characteristics of the migrant population are unchanged from two or even three decades ago. The problem, as in the past, is the lack of available and accessible coordinated health services which can effect continuity of care to a highly mobile, largely non-English-speaking, poverty population.

"Migratory farm laborers move restlessly over the face of the land but they neither belong to the land nor does the land belong to them. They pass through community after community, but they neither claim the community as home nor does the community claim them . . . As crops ripen, farmers await their coming; as the harvest closes, the community with equal anxiety awaits their going."[1] Every year farm workers and their families, numbering more than 1 million, leave their home counties in search of employment in the fluctuating seasonal farm labor market.[2,3] An additional 3 million people seek similar jobs but do not leave their home base. The problems common to both of these groups are many and include economic depression, limited education, inadequate nutrition, and poor health.

The majority of farm workers resides in Florida, Texas, Arizona, and California.[4] In the early spring the migrant farm worker and his family travel north along the eastern seaboard, across the midcontinent or through California to Oregon and Washington. During the summer and early fall, these workers move from place to place in an uncoordinated fashion attempting to find work cultivating or harvesting crops. Having been an important part of the work force in some 46 states and 900 counties, most families return to the areas of winter residency by late fall.

The domestic farm worker is characteristically a young, Mexican-American male, although there are a substantial number of Black and Anglo farm workers in the eastern stream and several thousand Indians in the western stream. Half of the workers are less than 25 years old, and a quarter are between 14 and 17. Females comprise about one-fourth of the agricultural worker force.

The job of the domestic farm worker is unattractive. The work usually requires continual stooping and lifting. It is dirty, exhausting and monotonous, and lacks dignity. Workers are frequently housed, fed, transported, and worked in gangs, but migration is one way of finding work.

During 1969 the average farm worker income ranged from just over $3,000 in California to less than $2,000 in Texas[4,5] (35% of Mexican-American families in the Southwest had incomes of less than $3,000 in 1969). This reflects the limited availability of work, the abbreviated work year, and the low wage rates paid for farm work. In the same year the typical farm worker, whether migrant or nonmigrant, was employed fewer than 100 days at an average wage of $1.33/hour. To some extent these earnings are supplemented by nonfarm income, but welfare payments represent a minor contribution to income. Most of these families are working poor.

The educational attainments of farm workers are low. The median number of school years completed by children 14 years of age or older varies from a high of nine years in California to slightly less than six years in Texas. More than 87% of all farm workers have failed to complete

high school, while 29% of farm working males are illiterate.[5,6]

Hunger and malnutrition are major problems for the farm worker population, especially those who migrate. In Hidalgo County, the Texas county with the greatest number of migrant farm workers, just under 20% of migrant families have clinical evidence of failure to thrive, vitamin deficiencies, protein deficiencies, or nutritional anemia.[7] In Colorado, 16% of 300 migrant children studied had hemoglobin or hematocrit levels below the tenth percentile for age, 20% had vitamin A levels two or more standard deviations below the accepted normal, 20% had total serum protein levels two standard deviations below normal, and 26% had abnormal serum albumin levels.[8] State and local solutions for these problems have been designed for stable populations, but are ineffective for migrants. Federal programs such as food stamps, surplus commodities, and emergency food services are more successful, although they are far from uniformly effective in meeting the food needs of migrants.[4]

The incredibly inadequate health status of the migrant and rural poor farm worker has been further reported in numerous studies and health department reports across the country. In one study less than 50% of the children were adequately immunized against diphtheria, pertussis, tetanus, polio, and measles.[9] In another study 40% of preschoolers were below one standard deviation, and 18% below two standard deviations, for head circumference.[8] Infant mortality is from two and one-half to three times the national average, and the post-neonatal death rate is twice the national average. The prevalence of infections and infestations is high as is the incidence of recurrence. Dental caries are common to nearly the entire population and extractions constitute 25% of all dental services.[10] Generally, these problems are the result of unavailability and inaccessibility of health services which have led to a second level of priority for health problems among farm workers.

The poverty and suffering of the seasonal farm workers is unmatched in America. So isolated, so rootless, and so defeated are the migrants that their continued submission is an inherent feature, and a tragic element, of the migratory pattern. The existence of this reality in the late 20th century is embarrassing and a national disgrace. The situation affects many disciplines, but as health providers we must contribute to its resolution by: (1) creating an awareness of the problem among health providers and others; (2) developing an understanding of the problem, its evolution and its present magnitude; and (3) appreciating and accepting the cultural differences between Anglos and the majority of farm workers.

For various reasons many Mexican-Americans have experienced difficulty in adapting to the dynamic industrialized society of the United States. They tend to live together in one part of town where rent, ownership, and utility costs are low because of low income, large families, language difference, and cultural differences. Geographic separation has led to ignorance within each population regarding the other and has resulted in lack of understanding, stereotyping, and resentment. Each population feels superior and believes that the other behaves improperly. As a result, there is little likelihood of understanding between groups, especially in view of the language difference.

The language problem is frequently a serious one for the Mexican-American

child upon entering school. Many schools forbid the speaking of Spanish for various reasons, the most likely being that the teachers can't speak it. As a result, the Spanish-speaking child suddenly finds himself needing to master an alien tongue and at the same time use it to function as a student. Further, the Mexican-American child comes to school without the environmental experience upon which school life is based. The effect of all this is a devaluation of the culture, a delay in the development of self-esteem, and poor school achievement. These factors greatly affect the physical and emotional growth and development of the children.

Differences in value orientation between cultures have also created problems. Mexican-Americans value traditionalism, familism, paternalism, personalism, dramatism, and fatalism. Anglos value change, success, efficiency, education, and communication. These cultural values are in many cases nearly opposite.

In Mexican-American society the family is the main focus of social identification in all classes, with authority being vested in the father. Outside of the family or kinship, relationships are between individuals and are characterized by distrust, apprehension, and suspicion. As a result, defenses are kept high and social distance is maintained until such time as a trusting relationship is developed.

In the notions many Anglos hold of Mexican-Americans, a dual morality exists in which the latter are felt to be inferior. This feeling leads to exclusion, subordination, and discrimination. Conversely, Mexican-Americans conceive of most Anglos as braggarts, inconsistent, insincere, mercenary, exploitative, and unkind. Nevertheless, Anglos being the dominant group and monopolizing accomplishments and rewards cause the Mexican-Americans to share the views held of them by the Anglos. Being constantly told they are inferior, they begin to behave in that pattern.

The experiences of Mexican-Americans in general have affected their behavior and their view of the world around them. They are a proud people and their pride is identified in La Raza. This implies a mystical bond of blood and custom between all Spanish-speaking people with a separation of them from all others. The maintenance of this "racial" identification involving ties of language and custom seems to encourage acculturalization.

There are a number of factors which make resolution of the migrant situation difficult. The majority of past efforts to provide health services to migrants has taken place in stream where manpower, attitude, and funding is more adequate. However, because of poor communication and lack of medical records, this approach is not efficient or comprehensive. It results in duplication of services for some at the expense of no service or inadequate service for others.

Thus, the delivery of health services to migrant and rural poor farm workers is bad and destined to get worse unless some significant revisions or additions are undertaken. An effective solution will be difficult. Any effort will require the emphasis of service to be on prevention and to include health education of parents and children. The basic comprehensive service must be developed jointly with the farmworkers and take place in the home-base states of California, Florida, Arizona, and Texas. Manpower and realistic funding must be increased but must emanate from sources which are available, accessible, and acceptable. Medical information on each farm worker must be coordinated

and readily available to health personnel regardless of where the patient presents for service.

Health providers have a major responsibility in resolving this problem. How will you and/or your medical organization contribute?

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Freud and cancer

Charles T. Brown, MD

Although it is common knowledge that Dr. Sigmund Freud is the author of psychoanalysis, the circumstances of his death are not so generally known.[1] In addition to his early work and discoveries in medicine,[2] Freud has left to all physicians a monumental example of courage and fortitude. This example is the way in which he lived and worked during the last years of his life in the face of constant suffering from a carcinoma that had invaded the oral cavity and resulted in his death 16 years later. During the years of his illness he continued to remain active professionally and although in constant pain, he endured suffering and other misfortunes in his life bravely and uncomplainingly. He had full access to many drugs that promised him "the blessings of Lethe" and relief from pain; however, until his death he refused them all. Freud preferred to work in full possession of his faculties rather than to dull his feelings and sensibilities. He realized that to do so would be to his own detriment as well as to that of his patients. As he remarked to a colleague, Dr. Stefan Zweig, "I prefer to think in torment than not to be able to think clearly." The school of psychiatry that bears his name is still somewhat controversial; however, there will never be any doubt about the heroic character of the man himself.

The Beginning

In 1923, Dr. Sigmund Freud was 63, and lived with his family in Vienna where he maintained an office in his house. One afternoon, while engaged in an interview, he became aware of a small soreness in his upper soft palate along the upper alveolar bone on the right side. Because the soreness was persistent, Freud consulted one of the leading otolaryngologists of Vienna, Dr. Marcus Hajek, who made a provisional diagnosis of leucoplakia. Hajek attributed the lesion to Freud's incessant cigar smoking, and advised that the leucoplakia be treated at a clinic on an outpatient basis.

Freud agreed to treatment and excision of the lesion, however, a few days later he chose to enter the hospital for a brief stay. He evidently felt that the oral lesion was more serious than Hajek had intimated. He was fortunate to have entered the hospital, for he suffered a serious postoperative hemorrhage during the night following surgery. At his own insistence he was allowed to return to his home after he had recuperated the following day. Thus ended the first operation upon the lesion. Freud was to undergo a total of 33 surgical operations before he was released by death. Hajek performed a biopsy upon the excised lesion and pronounced it malignant, although he did not inform Freud immediately. Dr. Guido Holzknect, one of the pioneer radiologists of Vienna, then treated Freud on two occasions with x-ray followed by radium implantation. By then, Freud was informed of the true nature of his illness and he suffered intensely from the toxic effects of the treatment. After a brief vacation, Freud was once more examined and a possible recurrence was predicted.

The Suffering

Accordingly, preparations were made for a more radical operation. Dr. Hans Pilcher, a distinguished oral surgeon of Vienna, assumed treatment of the case and in the operation performed at the Auersperg Sanitorium of Vienna in October of 1923, he removed the entire upper jaw and palate on the affected right side. This threw the nasal sinus and mouth into a some-

what single cavity that necessitated a bulky prosthesis in the form of a magnified denture or obturator. Designed to shut off the mouth from the nasal cavity, it was extremely difficult to insert; to fulfill its purpose the obturator had to fit close and very tightly. Freud referred to his prosthesis as "the monster." More than once Freud and his daughter would struggle for half an hour, with the assistance of the surgeon, to place the obturator-denture properly. Following the operation and the necessity for this prosthesis, Freud's speech became somewhat nasal in quality and the resulting damage to his eustachian tube rendered him almost entirely deaf on the right side. Poor Freud! Not only had Hajek pronounced a severe interdiction against his beloved cigars, but the one that he was occasionally allowed to smoke had to be inserted into his mouth by prying it open with a clothes peg. Although his physicians were unanimous in agreement that the cigar smoking should be discontinued, Freud was never able to deny himself this indulgence for long. He called it "humoring the witch." In the latter part of October, Freud was permitted to return to his office and resume work; however, complications ensued. The septic and necrotic tissue that fell away was found to be cancerous, so Pilcher performed further surgery. At about this time, Freud asked to undergo a Steinach operation in the hopes that a ligation of the vas deferens might prove of benefit and to at least delay any further progress of the cancer. He obtained but slight benefit, if any, from this maneuver. The months and years dragged on, with Freud making regular trips to consult with Pilcher and to undergo further x-ray treatments. Several alterations were made in the prothesis with some improvement; however, Freud was

Photo by Max Halberstadt

never able to adjust to its use. The operations continued through the years and the pain persisted without surcease; however, Freud continued to see a few patients daily in spite of his misery. He had now begun to live the life of a semi-invalid, and as he approached his 70th birthday his many friends and colleagues had begun to note the change wrought by the inroads of the agonizing disease. About this time in the winter of 1929, Freud was fortunate to engage the faithful services of a young Viennese internist, Dr. Max Schnur, who was somewhat psychoanalytically oriented. Schur undertook his arduous task with patience and enthusiasm along with considerable professional skill, although he realized that the case was hopeless insofar as a permanent cure was concerned. Despite severe dissensions and difficulties among the specialty that he had labored to develop, Freud continued to see a few patients each day and his mind remained as keen and alert as ever. His prolific writing continued, and the severe treatments served merely to delay the inevitable end. Meanwhile, the ominous rumblings had begun in Germany and Austria that were to presage the end. Hitler's legions were on the march.

The End

In 1938 the long years in Vienna were brought to a close, and after considerable persuasion Freud went "into exile" as he was wont to call it, and live in London under the aegis of his friend and colleague, Dr. Ernest Jones. Freud took up residence at No. 20 Marefield Gardens. In August of 1939, Freud's condition worsened considerably and he spent considerable time on a lounge in his garden. Someone gave him a copy of Balzac's *La Peau de Chagrin* to read, upon which he commented wryly, "That is just the book for me. It deals with starvation." In the latter days of September he weakened and he sent for his beloved Dr. Max Schnur, who was also in London awaiting his call for naturalization in America. Schnur, seeing that the man was dying in torment, prevailed upon Freud to accept a strong sedative. Freud breathed a sigh of relief and died just before midnight on Sept 23, 1939.

Conclusion

Dr. Sigmund Freud was cremated at Golder's Green in London, and on the morning of Sept 26 his remains were inurned in a Grecian urn, the gift of Dr. Marie Bonaparte. His pupil and friend, Dr. Ernest Jones, delivered the funeral eulogy in which he said in part . . . "Our first thoughts must surely be for the dead man himself . . . he will suffer no more . . . he is being buried here today in the atmosphere he would have wished, one of stark truth and realism; in sheer simplicity without a note of pomp or ceremony . . . and so we take our leave of a man whose like we shall not know again."

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Brief Summary

Indications—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

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Precautions—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitryptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient giddiness or ataxia may occur.

Adverse Reactions—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, dizziness, facial numbness, and allergic reaction typified by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 306433

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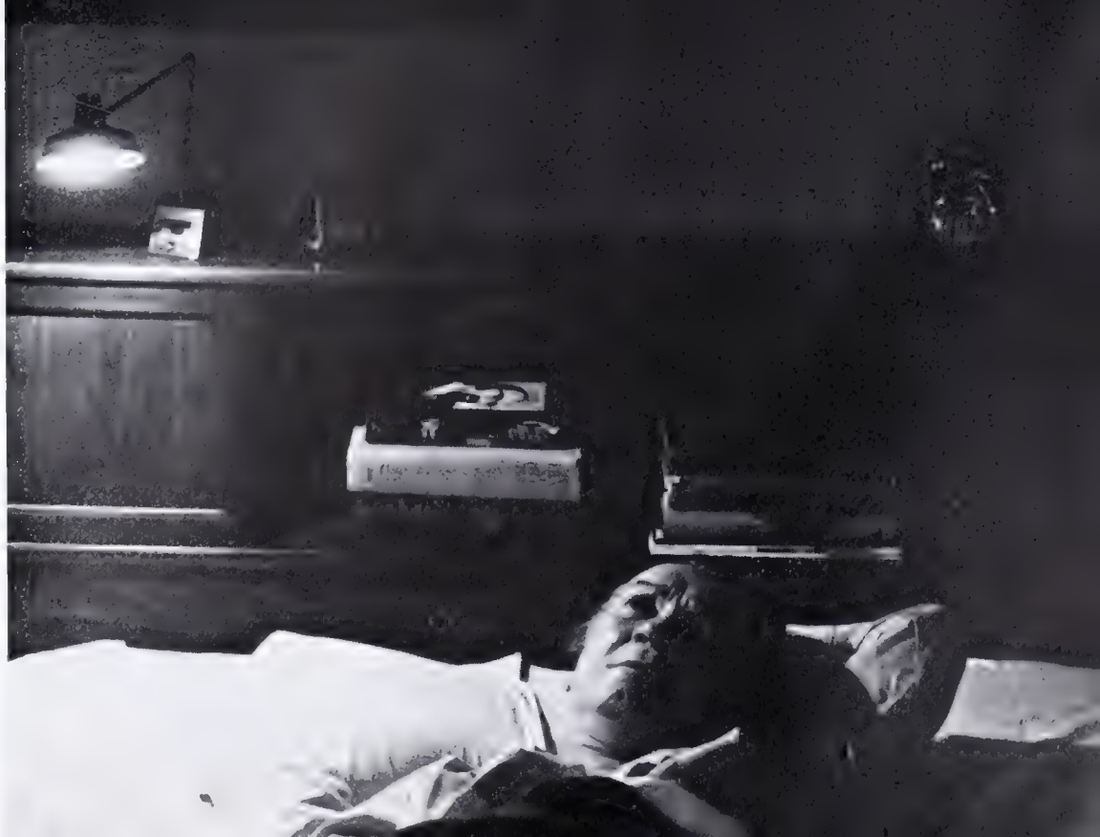

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Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid,* 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

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There can be no disputing the fact that records count, and poorly kept records can quite easily cause a businessman to pay more than his fair share of taxes. The professional man whose records are properly maintained and kept up to date is able to cut unnecessary expenses, such as these tax overpayments, and thus increase income.

Why Records Count

A well-planned system of record keeping shows the doctor at any time the precise progress—or lack of it—that his business is making. Today's doctor must have this knowledge if he wants his income to grow. By glancing at his records, the doctor should be able to answer such basic questions as: (1) How much total business is he doing? (2) How much cash does he have both on hand and in his bank account? (3) Is this amount sufficient? (4) Is there any cash shortage? (5) How much money does he owe others? (6) What were his expenditures for any given time period?

Also: (7) How much is he obligated to pay out in taxes—federal, state and local? (8) How much profit (income) is he earning? (9) What is his net worth, that is, what is the value of his trade? (10) What are the trends in his income, expenses, profit and services? (11) How is the business progressing from month to month, year to year? (12) How does this income-outgo compare with that of other area doctors?

These are key questions. Their answers are, in essence, directional signals. They tell the doctor where he is going, but more importantly, they also tell whether a change in course is necessary. By understanding and analyzing the existing conditions, he can take swift, yet intelligent, action to improve his position. By not having this data instantly available, he is only creating problems for himself and his family.

Proper record keeping should not be left to chance, for it not only provides the all-important daily check on business health, it also offers valuable fringe benefits.

Fringe Benefits

A doctor seeking a loan must present his financial statements to his bank. A good set of records is an absolute must in compiling the financial statement. Furthermore, a good set of records saves time by enabling the potential borrower to prepare the necessary papers quickly.

Another advantage: A well-maintained set of records provides a day-to-day accounting of tax deductible expenditures which might otherwise be forgotten or overlooked. How many times have you or one of your assistants paid for postage out of the cash drawer and forgotten to enter it? Did you or one of your employees run to a medical or office supply house in an emergency and forget to post the cost of the trip? These are all tax deductible expenses insured in your business operations.

Who Sets Up Records?

Since each business, whether it be a lawyer's office or a doctor's, presents a special situation, your record keeping system should be tailor-made specifically for you. You should have a chart of accounts (a listing of the type of income and expenses, as well as type of inventory, asset, and liability accounts). If the chart of accounts is separate as to profit and loss, it simplifies the compilation of a profit and loss statement at the close of each month.

In any case, a good record keeping system could provide ready answers to the questions above. The components of such a system should, more specifically, include the following basic records: cash receipts, to record cash received; cash disbursements, to record your expenditures; fees charged, to record and summarize monthly income; payroll, to record employee wages and deductions; equipment, to record purchases of technical equipment, office furniture, or motor vehicles; accounts receivable, to record balances owed by your patients; and accounts payable, to record what is owed.

Who Maintains Records?

To keep these records the doctor has several options. Whoever sets up the system may keep them, perhaps the costliest choice; you or your wife may look after the books; or you may use a part-time or full-time bookkeeper. Then, there is the free lance bookkeeper who works for several clients.

You may, of course, manage the system yourself and make the entries to cut down on the cost, but, if you choose this option, you should have a specialist—a professional counselor—who will stop by at least once a month to check your system, prepare a monthly profit and loss statement, and guide you in tax considerations. He can also show you where you may have a particularly unprofitable area in your trade.

These counselors have helped many doctors, as well as other professional men, to straighten out their business and tax problems.

As one New York physician put it, "Being a professional person is not necessarily the same as being a good business person. Help with our problems in the area of expense deductions, tax planning, and bookkeeping has relieved us of much of the concern many practitioners have with these matters of importance to all of us."

A good system is custom-tailored to fit the needs of the medical professional by financial professionals.

The formula for such a system's success is quite easy to comprehend. It merely takes into account the basic requisites of any successful record keeping formula: (1) It should be simple. (2) It should be easily and quickly "implementable." (3) It should provide easy procedures for day-by-day figure compilation. (4) It should provide a periodic "summation," enabling an at-a-glance perspective of your business. (5) It should require very little time on your part (at the most ten minutes or so a day) to transcribe pertinent figures. (6) It should be so simple that you can control the system regardless of which professional accountant you may use.

Analyzing Records

The day-to-day records and the monthly profit and loss statements must be properly interpreted to yield an accurate picture of the state of your business, how it got that way, and what you should do about it.

It is also helpful to prepare an application of funds statement at year-end. This will show you where the money goes. Did it all go for your salary or was some reinvested in the business? This will give you a true picture of what your return on your time and effort is.

Profit and Loss Statement

The profit and loss statement tells what your operating profits are.

General administrative and other expenses should be listed and subtracted from total fees received to arrive at net profit.

This listing should include such items as supplies, professional fees, employees'

salaries, rent, interest and bank charges, business taxes and licenses, repairs and maintenance, insurance, office supplies, dues and subscriptions, travel costs, laboratory fees, auto expenses, laundry and uniforms, telephone, meetings and seminars, entertainment, utilities, contracts and contract services.

On a monthly basis, a profit and loss statement tells you where you stand; on a yearly basis, it tells you how you have done. The application of funds statement at year's end tells you where profits went, and what your return was for your year's work.

The Tax Picture

These same records are your key to paying taxes, claiming deductions, and verifying these claims. How you set them up can sometimes provide a tax advantage. Since many areas have local as well as state and federal taxes, the doctor should talk with his business counselor. The counselor is the logical one, also, to make out the tax returns with ease and knowledge. Ask him to forewarn you as to what taxes you are liable for, and also to point out ways, if any, you can save money in the year ahead by changing your methods of operation. Be aware of dates that taxes are due and accrue proper funds for that time.

Protecting Records

No matter what kind of arrangement the doctor decides upon for record keeping, he must protect his records against disaster. Imagine starting your practice all over again if all your financial, legal, and operating records are lost through fire, flood, or theft.

Disaster-struck doctors will seek reconstruction through financial help from banks or government lending agencies. However, they often cannot obtain this assistance because they have no figures to substantiate their claimed loss or to accurately determine their needs. Can you state, now, how much it would cost for you to rebuild your office and replace its furnishings and equipment in case of a total loss?

Likewise, insurance companies want accurate, detailed reports. But if all current records are destroyed, the true extent of the loss can't be determined, and compromise settlements can cause great financial loss to you, the insured.

Your accounts receivable records—that is the amount of monies owed to you by patients—would be irretrievably lost if those records were destroyed. Could you accurately rebuild your patients' IOUs, if all these files were suddenly lost?

Another consideration is various taxing authorities who require that you retain for specified periods of time copies of social security and state unemployment records, substantiation of business expenses, depreciation schedules, and related income and expenses.

Revenue agents may strike out perfectly legitimate claims for depreciation unless you can prove, with adequate records, their purchase dates and cost.

Furnishing Proof

If tax returns are questioned, the doctor must substantiate his claim by producing account books, plus such original records as invoices, bills, vouchers, and receipts.

If you want to take the full deduction for such unusual expenses as entertainment and travel incurred on behalf of your profession, records must be presented to show these claims are accurate and allowable.

In addition, employees may require their employer's testimony or other proof of their earnings.

Federal and state examiners may want to check payroll records to see if you have complied with minimum wage and overtime pay regulations.

Protecting Yourself

The case for record protection obviously is overwhelming. But can a doctor with moderate financial resources protect himself against loss? This question can be

more than counterbalanced by asking: Can any professional man afford not to protect his livelihood from a disastrous loss? Only you can answer this. But the following information may guide your decision.

First, you should take stock of the situation. Valuable papers which are used infrequently can be placed in a safe deposit vault at low cost, or they may be kept on the premises if storage facilities thoroughly protect them against damage.

Current records of accounts receivable and payable should be reproduced regularly and preserved in a safe place. Similar precautions should be taken for leases, contracts and policies. Insurance policies and related data also deserve extra care.

Remember, however, that safety measures must protect materials which are up to date or of long-term value. If they aren't, you are missing the whole point of the safeguarding procedure.

After assembling the materials and papers to be protected, contact a warehouse, bank, or other safekeeping institution and describe your space needs in order to obtain a price quotation for bulk storage of records. Then you should draw up a plan by which records may be continuously copied and sent away for safe storage.

Microfilm can also be used—on contract, with rented equipment, or internally with purchased equipment. The determining factors are cost, volume of work, and control requirements. The great advantage of microfilming is space saving. This factor can be especially important if the storage space to be used is expensive. If the space is not expensive, however, full-sized records can probably be stored cheaper.

The Counselor's Role

Meanwhile, it is important that you do not overlook the role of your business counselor to help prove claims for loss and to help reconstruct any records destroyed by a catastrophe.

In this respect, you will do yourself a service to have a counselor on a regular monthly basis. If your record keeping follows the form suggested earlier, the records will serve as a cut-off point to reconstruct what has happened since the current records' destruction.

Prior months' records should be kept off premises. Therefore, in the event of disaster, it would be relatively simple for your business counselor to reconstruct last month's accounts receivable balances from the last month.

You, your business consultant, and your attorney should work together to decide the best type of organization and record keeping system that serves your business. Thus you can assure yourself that you know where you are and where you're going—all through the year.

Mr. Darwin, Regional Director, General Business Services, 6625 Avalon Ave, Dallas, Texas 75214.

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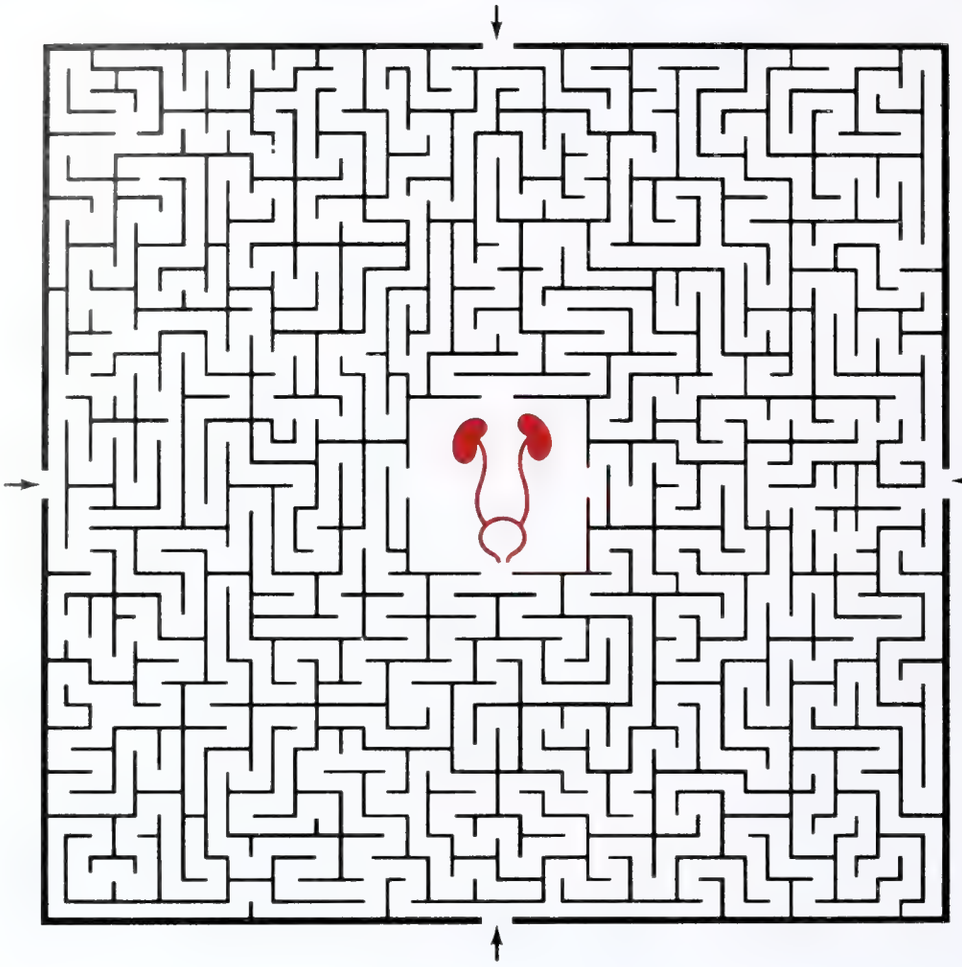
McNEIL McNeil Laboratories, Inc., Fort Washington, Pa. 19034

Basics in the treatment of urinary tract infection

Short-term therapy is no shortcut



Enter any opening and find way to cente of maze. Only one entrance will get you there.

The case for adequate length of therapy

In the insidious, common and often stubborn urinary tract infections, duration of therapy is not standardized. Because renal damage in many patients is believed to result from repeated urinary tract infections in childhood, one pediatrician has stated that a rational approach to treatment includes more than a perfunctory prescription of an antibacterial agent.[1]

The first 48 hours and after...

To ensure adequate therapy, one expert[2] proceeds as follows: an initial culture and one after 48 hours. If the antibacterial used has been effective, the urine will be clear of pathogens after 24 to 48 hours. However, urine should be recultured and any persistence of original pathogens indicates that another drug be used. On the other hand, if urine is found to be sterile, the same drug is continued for two weeks. Then urine is recultured starting a week after the last drug dose, and cultures are continued monthly for three months, then every three months for a year, and finally, every four months for several years.[2]

Another authority[3] notes that initial short-term therapy without careful follow-up can lead to trouble, as reflected by the high relapse rate. He treats an initial urinary tract infection with a sulfa drug after taking a urine culture. If *Escherichia coli* is found—and it is in 70 to 80 per cent of cases—he continues full dosage for 21 days. Five to 10 days after cessation of therapy, he recultures and takes a colony count. If urine is sterile, he recultures at three and six months.

Measurement of success

For success in the treatment of urinary tract infectio the urine must be kept free of bacteria for prolonged peri- ods until the focus of infection in the tissue has been erad cated.[3] This may take months or years when the infection is chronic or persistent. Criteria for successful therapy wit a drug are regarded as absence of symptoms and absence of pyuria and bacteriuria.[3] One authority defines significa bacteriuria as a count of at least 100,000/ml of the same organism in two consecutive clean-voided urine samples.[4]

The nature of the infection and the length of therapy

Long-term follow-up is essential, a clinician who treats recurrent infections for one to two years points out. Persistent, symptomless bacteriuria usually calls for urologic procedures to find the site of infection, because any underlying abnormality predisposing to urinary tract infec tion must be detected and corrected—otherwise therapy futile.[5] Upper urinary tract infection generally requires longer therapy than infection of the lower urinary tract.

In acute, simple, first infections of a symptomatic type, the pathogens are nearly always *E. coli* or *Proteus mirabilis*.[5]

References: 1. Normand, I. C. S.: *Practitioner, 204*:91, 1970. **2.** Kas E. H.: *Hosp. Med., 4*:73, 1968. **3.** Lampe, W. T. II: *J. Am. Geriatr. Soc., 16*:798, 1968. **4.** Petersdorf, R. G., and Turck, M.: *GP, 32*:(2) 130, 1965. **5.** Benner, E. J.: *Med. Times, 98*:(2) 95, 1970.

The case for Gantanol® (sulfamethoxazole)

ights susceptible organisms most often nplicated

Gantanol® (sulfamethoxazole) is effective against ot only susceptible strains of *E. coli* and *Proteus mirabilis* ut also of *Klebsiella-Aerobacter, Staphylococcus aureus* nd, less frequently, *Proteus vulgaris*—pathogens apt to be ound in the mixed bacterial flora of recurrent and chronic ystitis and/or pyelonephritis.

rompt antibacterial blood/urine levels

After the initial 2-Gm adult dose, therapeutic lood/urine levels are usually reached in from 2 to 3 ours, then maintained with either of the two dosage rms of Gantanol—tablets or suspension. And, Gantanol *.i.d.* dosage means up to 12 hours of antibacterial ctivity, obviating the patient's having to disturb his sleep o take medication. More severe infections may require *i.d.* dosage.

lso effective in certain nonobstructed hronic and recurrent urinary tract infections

Nonobstructed chronic and recurrent cystitis or yelonephritis develops more commonly in the elderly and ebilitated, and response to Gantanol (sulfamethoxazole) s often highly satisfactory. The usual precautions in ulfonamide therapy should be observed, including naintenance of adequate fluid intake, frequent c.b.c.'s nd urinalyses with microscopic examination.

Make the therapy suit the infection

In most urinary tract infections the *b.i.d.* schedule will usually suffice, but therapy must be maintained long enough to ensure eradication of pathogens. Mounting evidence in current medical literature suggests a minimum of 14 days of continuous therapy.* Adequate treatment for a sufficient time may also help prevent possible kidney damage. Gantanol is generally well tolerated with relative freedom from complications. The most common side effects include nausea, vomiting and diarrhea. Prescribe Gantanol tablets or the pleasant-tasting suspension.

*Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

In nonobstructed cystitis due to susceptible organisms

Gantanol® B.I.D. (sulfamethoxazole)

Basic Therapy

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc
Nutley, N.J. 07110

Please see following page for summary of product information.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. ***Note:*** **Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

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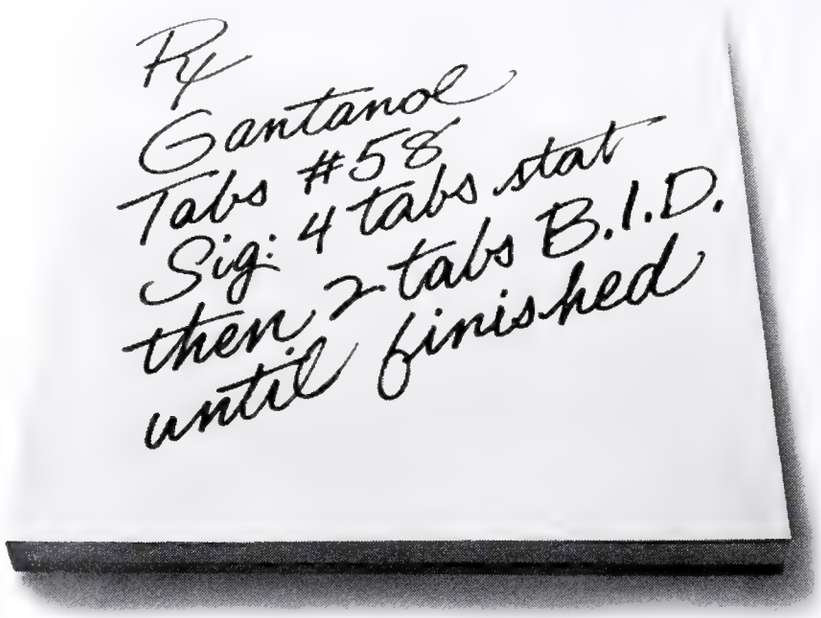


In nonobstructed cystitis due to susceptible organisms

Gantanol® (sulfamethoxazole) B.I.D.

Basic Therapy

Injuries peculiar to traffic accidents: seat belt syndrome, laryngeal fracture, hangman's fracture

Lee F. Rogers, MD

The diagnosis, management, and mechanism of three injuries peculiar to automobile accidents are presented. The "seat belt syndrome" is a combination of injuries to the abdominal wall, intra-abdominal viscera, and lumbar spine sustained in varying combinations by individuals involved in collisions while wearing lap-type seat belts. Laryngeal fractures occur as the hyperextended neck is thrust against the dashboard or steering wheel. The "hangman's" fracture, a fracture of the neural arch of the axis, is the result of an acute hyperextension of the craniocervical junction commonly created as the chin is thrust against the steering wheel or dashboard. Seat belts save lives and prevent injury. Their use is to be encouraged. Further improvements in restraining device systems are anticipated.

The relationship of passengers and drivers to the internal environment of the automobile and the forces created by collision combine to create distinctive injuries. Seat belts were introduced in the 1950s and became commonplace and finally required by law in the 1960s. The wearing of seat belts has sharply decreased the mortality and considerably reduced the morbidity of injuries sustained in automobile collisions. A pattern of injuries associated with the wearing of lap-type seat belts has emerged, however,[9] and has been termed "the seat belt syndrome."[2] The commonplace injuries of the face, skull, and neck sustained in automobile accidents are well known: facial and scalp lacerations, skull and facial fractures, "whiplash" injuries, and compression fractures of the spine. The majority of these are obtained with the head and neck in a neutral position or in some degree of flexion. It is less common for an injury to be sustained with the head and neck in extension. The anterior portion of the neck is thus exposed. Should the unprotected anterior neck be thrust forward against the dashboard or rim of the steering wheel (Fig 1), the larynx may be pinned between it and the spine, crushing or fracturing the larynx. Should the chin be thrust forward against the dashboard or rim of the steering wheel (Fig 1), the spine may be acutely hyperextended resulting in a fracture of the neural arch of the axis, C-2. This fracture is exactly analogous to that created by judicial hanging, and is thus termed the "hangman's" fracture.[6]

Seat Belt Syndrome

This term was first coined by Garrett and Braunstein[2] in 1962 to designate those injuries encountered in individuals injured while wearing a lap-type seat belt. No attempt is made to discredit the seat belt or imply that more injuries are created than prevented by its use. The best estimate is that fatal and severe injuries are reduced at least 35% through the use of the seat belt. Lesser injuries are reduced 50 to 75%. One cannot overestimate the value of remaining within the vehicle during a collision, which is accomplished by these restraints.

Typically, the individual affected is a passenger, either in the front or back seat, and is involved in a head-on collision resulting in sudden deceleration at impact. The impact speed frequently exceeds 50 mph. During the sudden deceleration, the body may be acutely hyperflexed over the lap-type seat belt (Fig 1) and the intra-abdominal pressure is suddenly increased as the viscera are compressed between the belt and spine.[2,8] This results in varying combinations of injury to the abdominal wall, intra-abdominal viscera, lumbar spine, and cauda equina.[9]

The characteristic injuries of the lower abdominal wall include abrasions and contusions outlining the position of the seat belt, and ruptures of the abdominal wall musculature and peritoneum beneath the contused skin. If the latter are not recognized and repaired at the time of injury, ventral hernias may result as a delayed sequelae.

The most common intra-abdominal injuries are longitudinal lacerations of the small bowel, particularly on the antimesenteric border of the jejunum and ileum, and tears of the mesentery which may include transections of the colic arteries. Ruptures of the spleen, pancreas, liver, and second and third portions of the duodenum also occur. Rupture of the gravid uterus has been reported.

Chance[5] first described a peculiar horizontal splitting of the spine and neural arch in 1948. These injuries were rarely recognized before the general use of lap-type seat belts. This is basically a transverse fracture of the vertebra consisting of ruptures of the posterior ligaments, transverse fractures of the posterior bony elements and vertebral bodies either alone or in some combination.[5,8] Characteristically, there is little or no displacement, compression, or rotation of the fracture elements. In contradistinction to the usual compression fracture, which most commonly involves either T-12 or L-1, the seat belt fractures are most frequent at L-1, L-2, or L-3. Fifteen percent of these fractures are associated with injuries of the spinal cord or cauda equina. These are most common when there is some displacement of the fracture fragments. Similar fractures have been encountered as a result of injuries in which the individual either fell or was thrown forward so that the anterior abdominal wall came in contact with some object, ie, a tree limb or motorcycle handle bars (Figs 2a, 2b).

In the common hyperflexion injury of the spine, the compression forces generated are sustained by the anterior half of the vertebral body, thus resulting in a wedge or compression fracture of the vertebral body. With the wearing of a seat belt, the fulcrum of the force is displaced anteriorly and lies at the seat belt.[8] The

1. Mechanism of injury. Left: Seat belt syndrome. Hyperflexion over lap-type seat belt. Inset: Resultant horizontal fracture of fourth lumbar vertebral body. Center: Fractures of larynx. Hyperextension of neck with larynx pinned against dashboard. Inset: Resultant fracture of thyroid cartilage. Right: Hangman's fracture. Chin hitting steering wheel hyperextending neck. Inset: Resultant fracture of the neural arch of the axis. (C-2).

entire spine is, therefore, posterior to the flexion axis and all of its components are subjected to tension stresses. This results in a disruption of the ligaments of the posterior elements of the spine or, should the ligaments remain intact, a transverse fracture of the posterior elements (Figs 2a, 2b) and, at times, of the vertebral body.

This same tension stress may account for the transverse ruptures of the abdominal wall musculature as well. The visceral injuries are created partly by the increased intra-abdominal pressure and partly by direct compression of the viscera, particularly the bowel and its mesentery, against the spine.[9] Intraluminal displacement of the liquid content of the small bowel at the time of rapid deceleration may be of sufficient momentum to create ruptures of the jejunum and ileum and cause sufficient tension to result in mesenteric tears. The tears are frequently parallel to the lumen.

The presence of the typical contusion or abrasion of the anterior abdominal wall, or the radiographic finding of a transverse fracture of a vertebra, should alert the clinician to the possibility of an intra-abdominal injury. Hypotension and shock, of course, suggest the possibility of arterial or visceral transection and acute blood loss. The diagnosis of bowel perforation in this setting is frequently delayed. Signs and symptoms may not be evident for 48 to 96 hours. The alkaline content of the bowel is evidently well tolerated by the peritoneum, and systemic findings may be delayed until frank bacterial peritonitis ensues. Direct radiographic evidence of perforation is usually lacking. The disclosure of free air is unusual following ruptures of the small bowel. Moreover, some severe contusions of the bowel may not rupture immediately. The severely contused bowel may proceed to necrosis and delayed perforation. Four-quadrant paracentesis, or better, peritoneal lavage, may be of considerable assistance in the early diagnosis of visceral injuries.

The treatment of visceral injuries is

2. A 23-year-old male motorcycle rider thrown against handlebars during accident. Did not sustain injury to abdominal viscera or neurologic deficit. Responded to conservative treatment in back brace. a. Anteroposterior view. Bilateral fractures of pars interarticularis of L-1 (↑) and fracture of left pedicle. b. Lateral view. Minimal compression of L-1 vertebral body. Fracture anterior-superior margin L-1 and L-2 vertebral body. Fracture lamina L-1.

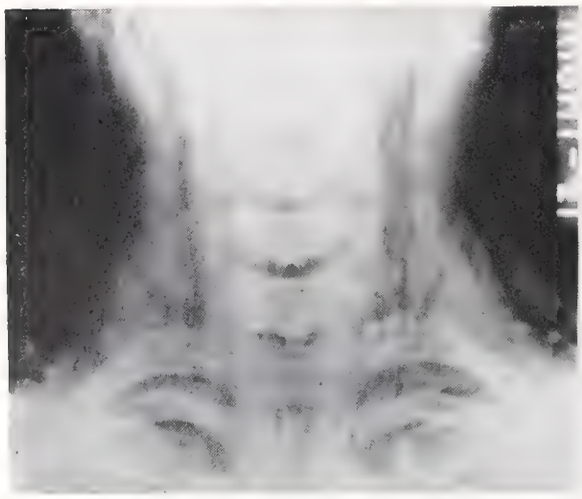
surgical. The transverse fractures of the spine are usually stable and treatment in a hyperextension cast is adequate in most cases. Occasionally, an open reduction and stabilization is deemed necessary.

Fractures of the Larynx

Immediate diagnosis of fracture of the larynx is important.[3,7] The diagnosis frequently is overlooked either because the physician is unaware of the possibility of injury or is distracted by seemingly or actually more severe associated injuries. Delays result in scarring, fibrosis, and contraction of the airway and larynx, thereby compromising respiration and speech.[3,4] The greater the delay the less functional the end result of treatment. The injury varies from a simple hematoma to a cartilage dislocation, or a fracture of the cartilages usually accompanied by mucosal lacerations. Frequently they are found in varying combinations. In addition, the hypopharynx or cervical esophagus may be lacerated as they are pinned between the thyroid or cricoid cartilages and the spine.

The injuries are classified as glottic-supraglottic and subglottic. The former includes fractures of the thyroid cartilage and mucosal laceration of vocal cords or supraglottic tissues, including avulsion of the epiglottis. The subglottic includes fractures of the cricoid cartilage and upper tracheal rings. Glottic-supraglottic injuries occur more commonly in females and subglottic in males. Presumably the more slender, longer neck of the female exposes the thyroid cartilage to injury.

The symptoms are pain, difficulty in breathing and swallowing, and change in speech quality or loss of speech. Physical



3. A 33-year-old male sustained fracture of left acetabulum and fracture of larynx and facial lacerations in auto accident. Driver without seat belt. Tracheostomy performed. Stellate fracture of thyroid cartilage subsequently reduced and laceration of right true cord closed at surgery. Stent utilized for six weeks. Excellent result. a. Anteroposterior view of neck on admission demonstrates considerable interstitial emphysema. b. Lateral view of neck demonstrates interstitial and retropharyngeal emphysema and obliteration of the normal laryngeal airway.

examination reveals a flattening of the contour of the anterior neck, and crepitus to palpation. These signs are subtle and easily overlooked. There is usually no evident external abrasion or laceration of the neck. Indirect laryngoscopy is frequently difficult. Direct laryngoscopy is required. Mucosal laceration, cartilage dislocation, cartilage protrusion, hematoma, and edema in varying combinations are identified.

Radiographs of the neck demonstrate subcutaneous emphysema and distortion of the laryngeal air column (Figs 3a, 3b). The former is secondary to mucosal laceration and resultant seepage of air into the soft tissues of the neck, frequently extending into the mediastinum. The latter is due to hematoma, edema, blood clots, and cartilage displacement. A water-soluble contrast swallow examination is of value in the delineation of pharyngeal and esophageal tears.

The treatment consists of the immediate establishment of a tracheostomy and open reduction of the laryngeal fractures and suturing of mucosal lacerations.[3,4,7] The larynx is then immobilized by the insertion of a stent or splint into the lumen of the airway to bridge the area. The stent is left in place for three to six weeks.

"Hangman's" Fracture

This fracture consists of bilateral fracture of the anterior portion of the neural arch of the axis.[1,6] The odontoid process remains intact. There is usually a variable degree of anterior dislocation of the axis upon the third cervical vertebra (Figs 4a, 4b). The anterior longitudinal ligament is disrupted, commonly with an associated avulsion fracture of the anterior-inferior margin of C-2. The vertebral artery remains intact.

The fulcrum of flexion and extension of the cranium upon the neck lies at the second cervical vertebra.[1] The force of an acute hyperextension of the head upon the neck is transmitted through the pedicles of C-2 between the superior and inferior articular facets as the chin encounters the dashboard or rim of the steering wheel or as the forehead encounters the windshield. The arch of C-2 is fractured between the facets and the anterior longitudinal ligament is disrupted.

There are no clinical findings pointing directly to this injury. Abrasions or lacerations of the forehead or chin are common and in keeping with the mechanism of injury. Frequently, point tenderness is present over the spinous process of C-2 and C-3. Surprisingly there are few neurological findings. The spinal cord is not damaged. Transient peripheral nerve deficits may occur or possibly transient quadriparesis. Retropharyngeal swelling or hemorrhage may be sufficient to compromise respiration and require tracheostomy.

Radiographic evaluation is necessary for definitive diagnosis.[1] The fracture of the neural arch may not be immediately evident or appreciated. Retropharyngeal soft-tissue swelling serves as a general clue to the presence of an injury in the cervical spine. An additional clue is an avulsion fracture of the anterior-inferior margin of the vertebral body of the axis or the anterior-superior margin of C-3. Subluxation of C-2 upon C-3 is almost invariably accompanied by a fracture of the neural arch of the axis.

The fracture is adequately treated by conservative measures.[1,6] The initial treatment is skeletal traction with cranial tongs for three to six weeks. A cervical brace is then worn for an additional six to eight weeks. This will usually result in complete healing.

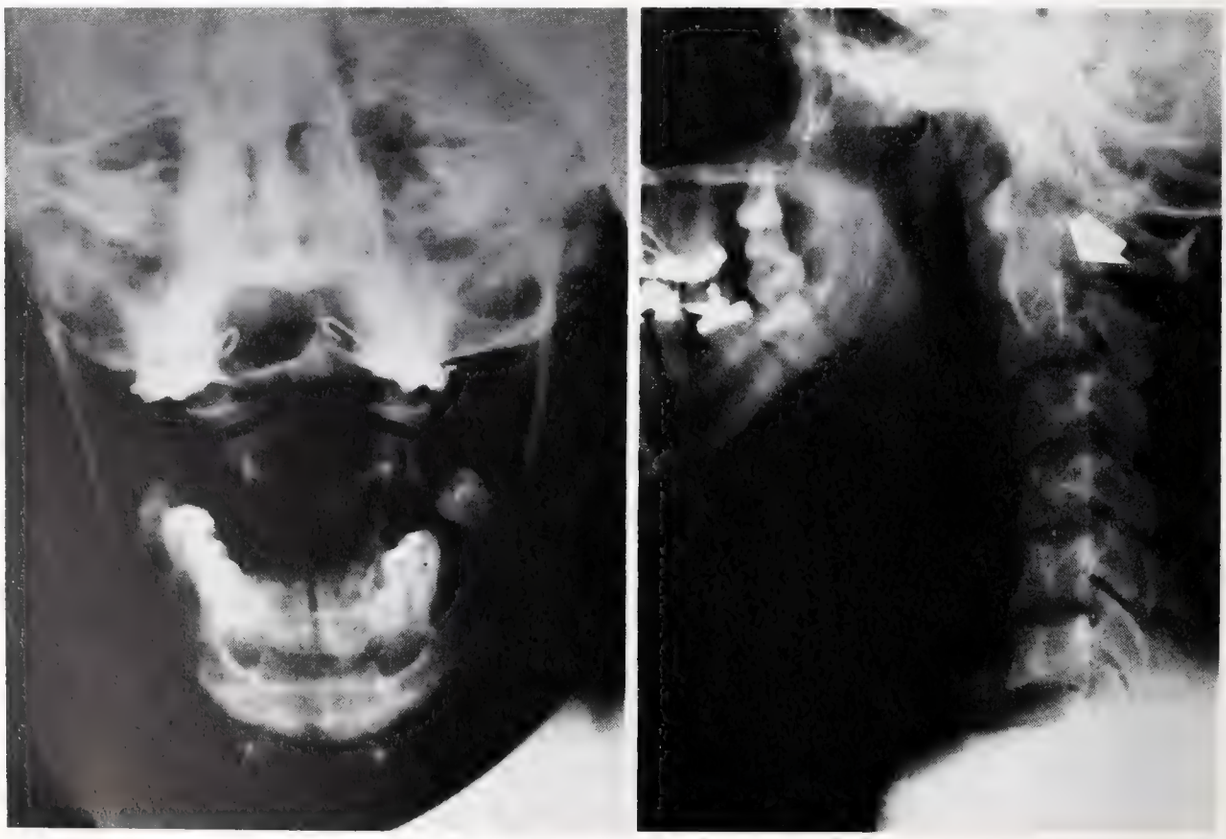
The reason that the prognosis is so fa-

vorable in this fracture as created in an automobile accident, and almost uniformly fatal (there are reports of survival) in judicial hanging is that the force is only applied transiently in an automobile accident, but persistently in hanging.[1] In hanging the sustained application of the force and the full weight of the body pulls the fracture fragments apart and places the cervical-cranial muscles under tension. Their tensile strength is exceeded and the spinal cord is disrupted. Death ensues.

Comment

The seat belt and other proposed restraining devices have two beneficial effects during a collision. They prevent ejection, allowing the occupant to decelerate within the vehicle, and to a great extent they prevent secondary collisions of the victim with the interior of the car. Following collision, tremendous forces are dissipated rapidly during deceleration. The restraining devices tend to define the area in which this energy is dissipated. As this area becomes smaller, the likelihood of a resultant injury within it becomes greater. Conversely, the larger the area in which this energy is dissipated, the less likely a resultant injury. Furthermore, the anatomical borders between the restrained and unrestrained portions of the body are quite likely to be the site of these injuries. The severity and mortality of injuries occuring in those individuals wearing a com-

4. A 21-year-old medical secretary involved in automobile accident. Front seat passenger without seat belt. Sustained hangman's fracture of C-2 without associated neurologic deficit. Treated by strap traction for three weeks and cervical collar for eight weeks. Excellent result. a. Anteroposterior, open-mouth view of cervical spine. Fracture not evident. b. Lateral view. Anterior dislocation of C-2 upon C-3. Bilateral fracture of the neural arch of the axis (↑).



bination of the lap and diagonal type seat belt is less than in those wearing either type alone. Fractures of the upper ribs, clavicle, and of the cervicodorsal spine may occur with this combination, however.

This explains the search for a more ideal restraining system—one in which the forces of deceleration would be spread over a larger area of the body, and simultaneously prevent acute flexion or extension of the head and neck or trunk. If the air bag mechanism can be developed into a reliable, failsafe apparatus, it might meet these criteria.

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Anesthesia for trauma
Is blood alcohol level a factor?

In a study of 574 trauma patients, 64% were found to have detectable blood levels of anesthesia and 28% had levels above the legal limits for intoxication. Evaluation of respiratory complications, circulatory complications, and overall mortality revealed no statistically significant correlation with blood alcohol levels. The data show a trend toward increased preoperative and postoperative respiratory complications in intoxicated patients and increased circulatory complications when blood alcohol exceeds 250 mg/100 ml, although significance was not achieved. The risk of trauma appears to be similar in drunk and sober victims.

With mortality due to trauma exceeding 100,000 yearly and morbidity many times that figure, the economic and social impacts of trauma are becoming increasingly important. Although trauma is the fourth leading cause of death in the United States, it is the leading cause of death in the first three decades of life.

Of fatal motor vehicle accidents, 37 to 58% involve drivers or pedestrians who have alcohol in their blood.[1-3] As ethanol intoxication seems to be related to the incidence and severity of trauma, it is appropriate to look at the influence of alcohol on morbidity and mortality in the patient anesthetized for surgical treatment of acute injuries.

The purpose of our study was to examine the relationship of blood alcohol levels to morbidity and mortality in the traumatized patient in the preoperative, operative, and postoperative periods. An attempt was made to answer the following questions: (1) What was the incidence of alcohol ingestion in traumatized patients? (2) Was the severity of the injury influenced by alcohol? (3) Did alcohol present a significant hazard in the anesthetic management of the traumatized patient? (4) Did alcohol add significantly to the postoperative morbidity and mortality of the traumatized patient?

Methods

Five hundred seventy-four patients who were anesthetized for the acute surgical correction of traumatic injuries were selected for the study. Trauma severity ranged from minor injuries to major multiple injuries. Some of the more seriously injured patients were not completely resuscitated before anesthesia was started.

Venous blood was drawn for determination of blood alcohol levels at the time of induction of anesthesia. Measurement was by the Conway microdiffusion technique. A Beckman colorimeter was utilized to quantitate the color change.

A comprehensive questionnaire was prepared for each patient. Information was sought on the pre-existing state of health, mechanism and severity of injuries, extent of resuscitation, and operative and postoperative course. The severity of traumatic injuries was classified as follows: Minor injuries were presumed to consist of superficial wounds without constitutional disturbances, for example, minor lacerations of extremities. Major injuries consisted of long-bone fractures, body cavity penetrations, crush injuries, and severe hemorrhage. Major injuries were further divided into those in patients adequately resuscitated before induction of anesthesia, and those in patients in whom full resuscitation had not been accomplished and emergency operation was essential to save the life.

Results

The 574 patients can be characterized as shown in Fig 1.

A comparison of patients with no de-

James F. Lee, MD
Robert J. Samuelson, MD
Thomas D. Watson, MD
A. H. Giesecke, Jr., MD

tectable blood alcohol levels with patients having some alcohol in their blood is shown in Fig 2. By legal standards, 28% were intoxicated and 64% had a measurable blood alcohol level.

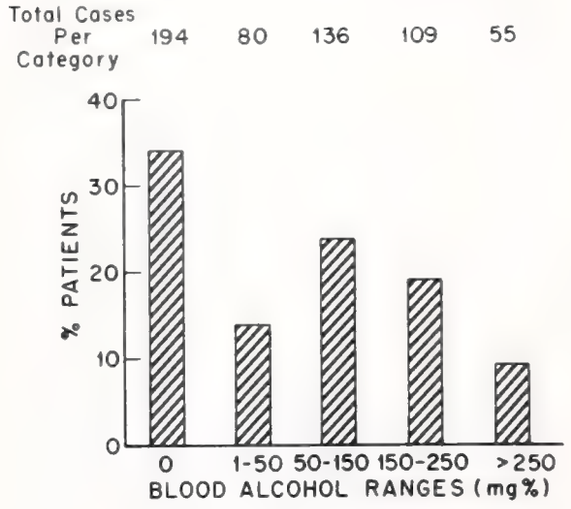
No statistically significant correlation was found to exist between the severity of injury and the blood alcohol level.

Possible trends in morbidity in relation to respiratory and cardiovascular complications are shown in Figs 3-4. The numbers in the columns represent the numbers of patients in the category, and the bars represent percentages of patients with that blood alcohol level having preoperative, intraoperative, or postoperative complications. There is an indication that increased preoperative and postoperative respiratory complications exist in the drinking patient over the sober patient, however, the trend is not statistically significant by chi-square test. Circulatory complications probably are no different in the sober and drinking groups, with the possible exception of the group with blood alcohol levels greater than 250 mg/ml. However, even this exception is not significantly different by chi-square test.

Mortality figures included all patients who died after being brought to the operating suite, whether or not death was related to anesthesia. Only one intraoperative death occurred in the series, in a patient with no detectable blood alcohol. The figures indicate that no increased risk from mortality exists in the drinking over the nondrinking patients once they reached the surgical suite.

Sex	Age	Type of Injury
M:83%	<20:12.5%	Motor vehicle accidents: 13.6%
F:17%	20-50:77.3%	Stab wounds: 29.1%
	>50:10.2%	Gunshot wounds: 48.8%
		Other causes: 8.5%

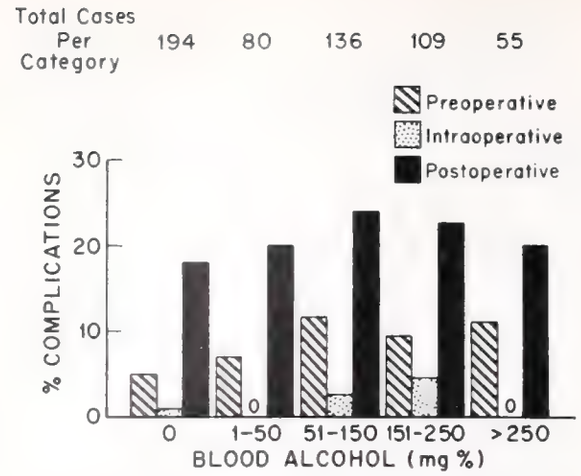
1. Characteristics of 574 patients in study.



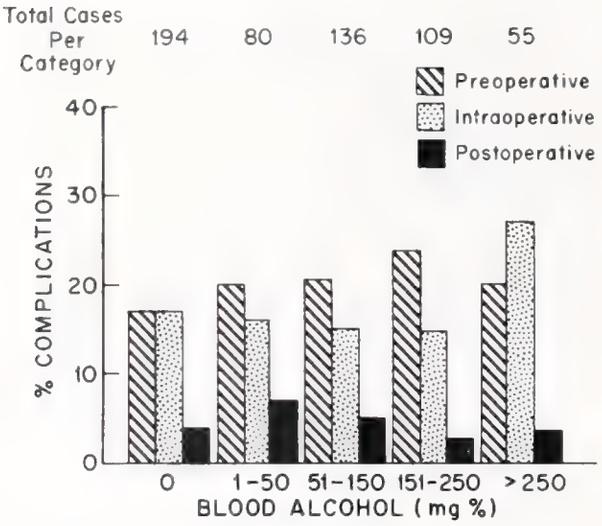
2. Range of blood alcohol levels in the trauma patient.

Discussion

Information concerning interaction of alcohol, trauma, and anesthesia in man is limited. Can alcohol ingestion be shown to influence the incidence of operative and postoperative morbidity and mortality of



3. Respiratory complications versus levels of blood alcohol.



4. Circulatory complications versus levels of blood alcohol.

5. Mortality versus levels of blood alcohol.

traumatized patients? Our experience suggests that if the patient reaches the operating suite, anesthetic complications (operatively and postoperatively) are not conclusively influenced.

Other difficulties may be encountered in the anesthetic management of the traumatized patient. In addition to the problems posed by the sober, chronic alcoholic, in emergency situations the acutely intoxicated, chronic alcoholic may be difficult to distinguish from the drunk, periodic social drinker. If this information were available, anesthetic management might be modified. In our study, only 24 of the 574 could readily be classified as chronic alcoholics on the basis of available evidence at the time of induction. Of these, 14 had significant blood alcohol levels on induction of anesthesia, 7 had no detectable alcohol in the blood, and 3 had less than 50 mg/100 ml.

Another factor which could significantly modify the patient's response to anesthesia is the concomitant use of other drugs.[5,6] Several studies have revealed that a wide range of potentially hazardous drugs, including barbiturates, hypoglycemics, amphetamines, antihistamines, steroids, and many others are being consumed. Studies also have revealed that not only are drinking drivers taking more different drugs, but are taking them in greater quantities.

Our study, based only on information from the patient prior to induction of anesthesia, produced two patients who admitted to habitual amphetamine ingestion. Eight others were being treated with diphenylhydantoin, digitalis, or hypoglycemics.

Although ethanol intoxication may be a potential hazard in the anesthetic management of the traumatized patient, other problems such as concomitant drug use, preexisting illnesses, or chronic alcoholism must be given equal consideration.

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A perspective of Korea

Robert L. Rock, MD

It was the year 1909 when an old woman in the last stages of leprosy lifted herself from the mud at the side of the road in Korea, and, after the manner of beggars in the Orient, called out to an approaching horseman, "Give me life."

Dr. W. H. Forsythe, a Presbyterian missionary stopped, lifted the woman onto his horse and led her 13 miles to the Kwangju hospital. From this compassionate act came the inception of what is today known as the Wilson Leprosy Center, a joint project of the Presbyterian Church, US, and the American Leprosy Missions, Inc., New York. During the ensuing years, the institution grew steadily and was moved, under the direction of Dr. R. M. Wilson, to its present rural location between Soonchun and Yosu Cities on the southern coast.

It was at this place that I had the privilege of spending a month in the fall of 1973, practicing ophthalmology as a guest of a long time friend from medical school days, Dr. Stanley Topple, a career missionary orthopedic and general surgeon from Decatur, Ga.

Improvement in care

Leprosy has come a long way from the picture seen only a few decades ago. Christian Missions has geared itself to the scientific advances. Life for the leprosy patient in Dr. Forsythe's day meant sanctuary, food, living quarters, and what meager medical care could be given in his remaining years. Life for today's leprosy victim includes curative drugs, corrective surgery, physical therapy, and social and vocational rehabilitation.

Wilson Leprosy Center near Soonchun, South Korea.

An even further step is the thrust of the mobile clinic team, which would find the patient in his own community, in the earliest possible form of the disease before disfigurement occurs. The team treats the patient in his home setting, with adequate safeguards for his family, of course. Elimination of the social stigma associated with leaving one's village to go to a leprosy center for treatment is a major step.

Hence, the leprosy colony located near the Wilson Hospital is accepting no new residents, reinforcing the priority on home-based treatment of leprosy as a medical problem, which it is, and not as a shameful "scourge."

Once as high as 1300, the population of the colony is now about 500, reduced in part by a large resettlement project. Eventually, through attrition of the present colony patients, that aspect of the program will be mercifully phased out. This is the way a missionary would like to "work himself out of a job."

But now there is plenty to do. The new hospital, a modern 40-bed facility, serves a wide area, and has far outgrown its inception as a leprosy treatment center only. A major part of the work is non-leprosy orthopedic re-constructive work (such as congenital deformities, post polio, complication of tuberculosis, and fresh and neg-

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Editor's Note: The author, Dr. Robert L. Rock of Austin, recently spent one month practicing ophthalmology at the Wilson Leprosy Center in Korea. Dr. Rock has made several previous medical missionary tours of service including trips to Nigeria, Pakistan and Haiti. While some of his trips have been under the auspices of the Christian Medical Society, Dr. Rock personally arranged his most recent trip with a surgeon friend working at the Center.

Drs. Rock and Topple with patients.

lected trauma cases). An active Skin Clinic and Eye Clinic is directed by Dr. Mia Topple, Norwegian born wife of Dr. Stan. Mobile clinics to the surrounding villages are very worthwhile services also.
My work included eye surgery and assistance in the regular eye clinic. We also surveyed the remaining several hundred colony patients and picked up a number of cases needing additional medical and surgical attention.

Ophthalmological concerns

You may be wondering what an ophthalmologist is doing working with leprosy patients. Leprosy has one of the highest incidences of a systemic disease affecting the eye, about 80-85%, mainly in the form of irido-cyclitis, scleral and cornea leproma, keratitis and scleritis, secondary cataracts, and complication of 7th nerve involvement. Lagophthalmos is especially a problem, leading to exposure keratitis, and resultant corneal scarring and ulceration can be catastrophic. Surgery for this poor lid closure includes the traditional medial or lateral tarsorrhaphy, temporalis muscle transplants, ectropion repair, and the newly devised silastic band dynamic closure, (Arion "cerclage" procedure) which seems to offer a major advance in both functional and cosmetic results.
Most of the colony patients are bacteriologically negative, either the "burned out" cases of many years duration, or as a result of curative drugs. The sulfone drugs have been available since the mid-1940's, and newer but more expensive secondary drugs like Lamprene are now available. ($75.00 for 1000 capsules which will treat a patient for a year, compared to about $5 per year for the sulfones.)

Typical day

A typical clinic day might involve 100 to 125 patients, ending around 8 pm. Thanks to the superb help of the operating room nurses and technicians, we could do 12-15 eye cases per operating day, while Dr. Stan and his staff did orthopedic work in the adjoining room.
A well-equipped Physical Therapy Department, headed by an American Peace Corps volunteer, Susan Krum, as well as a brace and limb shop, and other ancillary medical services are available.
Using the Wilson Center as "home base," I

A typical leprosy patient (inactive) at the Wilson Center.

was able to go to various other projects in special need of eye care. One such visit was an examination and treatment project to a leprosy resettlement area, Nam Won, about a 2½ hour train ride (costing about 25 cents) from Soonchun. Aside from the medical aspect, the enterprising community of about 100 cured leprosy patients was indeed an inspiration. They are self-supporting with their crops of rice, barley, vegetables, and fruit trees, as well as many pigs and about 30,000 chickens!

The graciousness of the host pastor convinced me that Koreans must rank with the very highest in hospitality. The eight course breakfast, including the traditional Korean dish, "Kimchee," a very spicy preparation of fermented Chinese cabbage, garlic, etc., had to be experienced to be appreciated.

Another side trip was to the government leprosy colony on the island of Sorokdo, off the extreme southern coast of Korea. This was rather depressing and foreboding, compared to the optimism of the previous resettlement project. Since they have no active MD there now, the work falls heavily on a dedicated Australian Catholic nursing sister. "Miss Margaret," and the small staff of male Korean "paramedics." Long lines of medically neglected patients thronged through the improvised "mass production" lines utilizing the hallways and corridors of the hospital. Lid surgery, pterygium surgery, and other non-intraocular procedures were done there, and the advanced cataract patients (almost all mature cataracts in an only eye) were brought back to the Wilson hospital in a Land Rover jeep-type ambulance, where better post-op followup could be obtained.

By this description of pressing medical need in the area I visited, I do not mean to imply that Korean medicine is backward. It is not, as the very up-to-date medical centers in the larger cities will attest. But this was the most rural and distant part of Korea and the institutionalized leprosy patient has many difficulties traveling to the medical centers. These difficulties include social factors, financial limitations, and the problem of transportation for the handicapped.

Points of interest included side trips to Buddhist temples, which appeared to me to exist more as tourist attractions of cultural heritage rather than a vibrant part of the religious life of the country. Korea has been one of the most receptive Oriental countries to the Christian missionaries. There are many churches and the Christians I talked with appeared to be dedicated and committed to their faith. Examples of modern martyrdom of the Christian leaders by the Communists during the Korean War are abundant. There is a Korean proverb that says, "Trouble is the seed of joy." Certainly these people have learned to endure hardship and upheavals, and have emerged with an amazing optimism and vitality.

A beautiful country on the move

As former military personnel who served in Korea well know, the country is a land

Ward rounds with Dr. Rock.

Mr. Cho poses by the mural of the healing of the ten lepers in the lobby of Wilson Hospital.

Two older men waiting in clinic line for treatment.

of mountains and carefully terraced rice fields, and the photographic possibilities of these and its rivers and oceans are virtually endless. I was impressed with the building activities of the energetic people, as evidenced by the bustling city of five million that is the capital, Seoul, rising on the ashes and rubble of the Korean War. At no time did I see a beggar in Korea. I saw poor people, but very little malnutrition and no "starving masses." One senses the positive attitude of a country growing and really on the move, certainly to be counted as one of the major nations of Asia.

Perhaps the most vivid memories I have of Korea are those of the typical fingerless leprosy patients, holding their charts or Bible between the stubs of their hands with a look that says, "Can you help me?" To me, the "unsung heroes" of the work there would be the dedicated Korean nurses and other paramedical aides who worked long hours without complaint. They worked unstintingly as a part of the team to help deliver the more abundant life to their less fortunate countrymen. I had heard implications of callousness and disregard for the value of the individual human life in the Orient, but this was certainly not the case. Probably half or more of the staff at the Wilson Center are cured leprosy patients themselves so they have a special compassion. In the lobby of the hospital is a mural depicting the healing of the ten lepers from the account in Luke 17:12-19 in which Jesus asks "Were not ten cleansed? But where are the nine?" The person who posed for the painting of the one who returned to give thanks is Mr. Cho, the very capable chief scrub technician in the operating room.

Martin Luther's statement, "So this is now the mark of which we all shall certainly know whether the birth of the Lord Christ is effective in us: if we take upon ourselves the need of our neighbor," was borne out daily in the lives of these humble people, whom I hope to visit again.

Orient adventure

Narrative by Howard M. Burkett, MD
Photos by Howard M. Burkett, MD and Ed W. Schmidt, MD

For our group of TMA members and their families the INTRAV "Orient Adventure" was a delightful experience.

After checking in at the Houston Intercontinental Airport, we met our tour guide, Bob Sherrill, who was to be our constant companion, source of information, protector, and director for the next 14 days. We boarded our 707 World Airways jet and were soon airborne.

After a round of drinks, a sumptuous dinner was served, complete with individual bottles of wine. Along with this, we were receiving preliminary instructions from Mr. Sherrill, who had made a number of previous trips, and was indeed extremely well informed and most accurate as to what we would expect to encounter on the entire trip.

First stop - Tokyo

Having crossed the international date line, we awoke to a breakfast served with champagne prior to landing at Tokyo. We were informed by the pilot that there was a 30 minute delay since the airport did not open until 6 am, and we had arrived in the area at 5:30 am. We circled and actually touched down at 5:50 am.

Immigration formalities were met in the usual fashion with passport and visas being inspected, and health cards being checked, and then a unique experience with a random sampling of luggage after which all of the passengers were required to answer in unison a resounding "No" to questions about whether or not we were carrying narcotics, an excessive amount of liquor, cigarettes or some contraband. We were then escorted through the waiting area where we were met by a formal reception line of INTRAV guides with greetings and the customary *Ohayo*, pronounced "Ohio" (good morning). We were bussed to the New Otani Hotel with a tour guide giving helpful information on registration, luggage arrangements, signing up for tours, etc.

The New Otani Hotel is indeed a luxury hotel of 20 stories with a delightful array of shops, a wide variety of restaurants featuring Japanese, Chinese, and American foods and a beautiful traditional Japanese garden which contained several small restaurants.

After a three hour siesta to compensate for the time change, there was an afternoon bus tour of Tokyo.

The INTRAV people maintain a desk in the lobby of the New Otani Hotel, as they do in the tour hotels in Hong Kong and Bangkok, and the attendants were most helpful for any and all details regarding city life, shopping, or anything the tour member needed to be more comfortable. In all of the cities it is essential for the traveler to have written instructions in Japanese or Chinese for the taxi cab drivers, and also written instructions to return to the hotel, the language barrier being so substantial.

On Sunday there was a motor coach tour to the Hakone National Park which was a beautiful drive by expressway to a land of green forest and shimmering lakes, during which Mount Fuji was visible. An afternoon tea stop was enjoyed at the magnificent old Fujiya Hotel, the oldest resort hotel in Japan, with its exotic gardens, waterfalls and cottages.

The first of the medical seminars was held that evening with Dr. H. Matsuda who lectured on "Medical Insurance in Japan."

One of the highlights of the tour was the Monday excursion to Nikko via a 90 minute first class train ride. In this cultural city we visited the incredibly elaborate wooden temple of the Toshogu Shrine. Among the intricate carvings are the famous three

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Editor's Note: Drs. Burkett and Schmidt were among the more than 150 physicians and spouses who toured the Orient this fall through the TMA group travel program. The editors of *Texas Medicine* appreciate this opportunity to share their experiences, impressions and photographs.

monkeys, "Hear no evil, See no evil, Speak no evil." This colorful shrine, constructed in 1636, is a photographer's paradise. Also on this trip was a spectacular mountain drive to Lake Chuzenji and a beautiful 333 foot waterfall. Back in Tokyo that evening was a medical seminar by Dr. Eyoiwao Ito on "Aortitis Syndrome."

A visit to the ancient capital

The following day brought a delightful trip to Kyoto via the "bullet train" which at times reaches speeds of over 130 mph, while remaining incredibly quiet, comfortable and smooth. The countryside of Japan is magnificent, with the rice paddies and tea plantations and the unusual site of Mount Fuji a second time.

The ancient capital city of Kyoto is a cultural center of classic arts and temples, including the famous Golden Pavilion and the Heian Shrine which was the picturesque garden filmed in the movie "Sayonara."

Hotel accommodations in Kyoto were unusual. We had been advised that we need not bring pajamas or toothbrush as they would be furnished by the hotel, and indeed in each room there were two kimonos and individual toothbrushes along with all the other niceties of a first class hotel. We luncheoned on sukiyaki in a traditional restaurant, seated on the floor.

The return trip on the bullet train was equally fascinating, but was unusual in that it was an hour late occasioned by a "slow down" due to a pending strike by railway workers.

A talk by Dr. Takuo Fujita on "Osteoporosis in Japan" preceded a free day for shopping in Tokyo.

On to Hong Kong

An early flight to Hong Kong the next morning included breakfast during the 2½

The New Otani Tower in Tokyo, in the building stage, will be 40 stories high. Dr. Schmidt recalls that after World War II the buildings in Tokyo were limited to eight stories.

Dr. Schmidt's photo backs up his statement that Tokyo is teeming with automobiles. He was very impressed with the efficiency and energy of the Japanese people.

Dr. Burkett found the Golden Pavilion Buddhist Temple in Kyoto an interesting photographic subject.

hours in the air. The finest accommodations on the entire trip were the hotel Mandarin in Hong Kong. I found it to be more like a typical British hotel, although the service was largely by English speaking Chinese. The accommodations were luxurious, including linen sheets on gigantic feather bed mattresses.

The first day in Hong Kong consisted of an afternoon tour by motor coach and a cable car ride to Victoria Peak for a splendid panoramic view of the fabulous harbor and the drive through Happy Valley and return to the hotel in time for dinner.

Saturday there was a tour of Kowloon and the new territories with an afternoon free for independent sightseeing and shopping.

I found Hong Kong to be the most fascinating of all of the cities, and, of course, the shopping was utterly fantastic. The Ocean Terminal in Kowloon presented the widest variety of merchandise in a modern three-story arcade, easily accessible across the harbor by a ten minute ride on the Star Ferry for the ridiculous fee of five cents first class (tourist class costs two cents per person). Computing the currency exchange was relatively simple in Hong Kong, with five Hong Kong dollars being purchased for one US dollar.

Sunday morning there was a film on acupuncture presented to the medical group. This had been produced in the People's Republic of China, and was run by a Chinese gentleman who spoke no English. It was narrated in English, and contained a great deal of "Chairman Mao" propaganda and demonstrated the use of acupuncture in various procedures, including a hysterectomy, the removal of a cerebellar tumor, and its use in an infant of less than a year for a laparotomy for intussusception.

Next, we were on our way to Bangkok. Tour guide Sherrill had advised us not to eat the dinner on the flight because of the delightful restaurants in the President Hotel in Bangkok. Most of the group gave heed to his advice and indeed the French restaurant in the President Hotel presented a superb cuisine that was well worth waiting for.

The ruins of St. Paul Cathedral in Macao is a major tourist attraction. Dr. Schmidt said that the main hotel of this small Portuguese colony bordering the People's Republic of China is styled after a Las Vegas gambling casino.

This magnificent view of Hong Kong and Kowloon was captured on film by Dr. Schmidt.

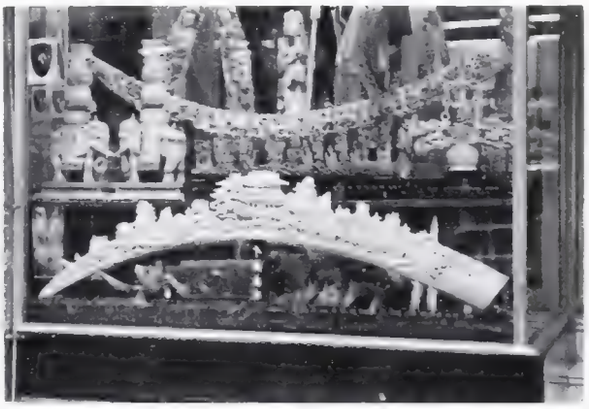
Journey to the Klongs

A highlight on Monday was the motor coach and launch trip to see Bangkok's "water people." We journeyed along the Chao Phya River to the Klongs (canals) to the famous floating market, and this was indeed a photographer's paradise. The "water people" live in small houses on stilts in the water, and they use the muddy water for washing, bathing, and toothbrushing. Water taxies with motors that would do justice to a

Neon lights and shopkeepers' signs clutter the view of this typical Hong Kong street scene photographed by Dr. Burkett.

Dr. Burkett's group got a close look at the capsized *Queen Elizabeth* during a cruise around Hong Kong Harbor.

"Junks," such as these in Hong Kong, became a familiar sight to TMA travelers. Dr. Burkett found Hong Kong to be the most fascinating of all the cities on the tour.



Not only are beautiful ivory carvings available in Hong Kong, but also Pepsi Cola, Coca Cola, and McDonald's hamburgers, according to Dr. Schmidt.

souped-up drag race plied the river at break-neck speeds, created monstrous waves that at times almost engulfed the 12 foot launches of the INTRAV group. The colorful array of orchids and wild flowers was fantastic.

The evening consisted of a tour to the Piman Restaurant with a typical Thai dinner with floor seating and a presentation of traditional Thai classical dancing.

Tuesday we were to have visited the Grand Palace, but unfortunately we were not permitted into the grounds because of some state occasion. The picturesque temples of the Emerald Buddha and the Golden Buddha were both fantastic photographic subjects.

We left Bangkok in a downpour and through clogged downtown streets that looked like New York City late afternoon, returning to Hong Kong via Thai International.

The following morning the medical group was treated to a visit to the Ruttonjee Sanitorium which is a tuberculosis and thoracic diseases hospital. This is a 260-bed hospital on the site of an old naval hospital, and there were many, many cases of tuberculosis, including a number of very small children. We were advised that it was in this hospital that the first operation was done with an anterior approach for spinal fusion, and some of the research was outlined to the group by Sister Gabriel who is an MD.

The last day in Hong Kong was free of any

scheduled activity except the Sunset Cruise on a private motorized Chinese Junk.

Home again

The next day consisted of luggage pickup, boarding the bus, and a reboarding of the "Stretch" DC-8 for the return flight home with the same crew that accompanied us across the Pacific on our initial flight. The last leg of the flight from Anchorage to Houston was seven hours followed by the long and laborious line (roughly it took me three hours) through customs with the mountains of luggage and purchases that most of the group had acquired.

I can truthfully state this was one of the outstanding experiences of my life, and my praise of INTRAV and its personnel cannot be strong enough. I am ready to go again when the opportunity presents itself.

Group travel popular among MDs

C. Lincoln Williston

International group travel has become extremely popular for many Texas physicians and their spouses and families in recent years. More than 1,600 participated in tours sponsored by TMA in 1973. An even greater number will travel this year on tours selected by the Association's Board of Trustees.

Two-week adventures will be presented by INTRAV to South America in February, Europe in June, the Orient in August, and to the Mediterranean in October. A nine-day trip to Yugoslavia in August will be under the auspices of Marriott World Travel. Another nine-day trip is being planned by Josten's, Inc., of Minneapolis to Costa del Sol in Spain in April.

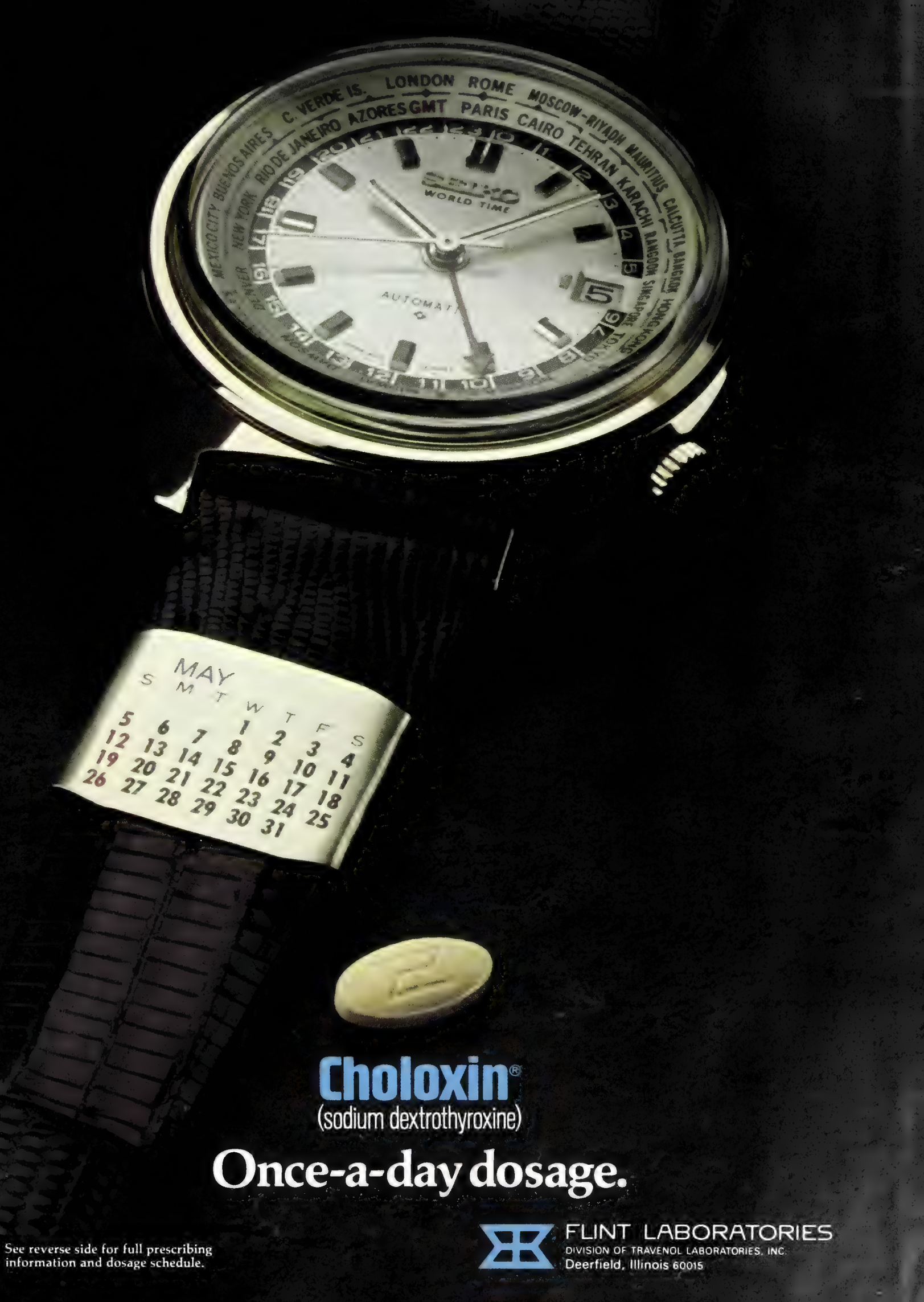
The advantages of group travel are many. Special tours are arranged to permit travelers to acquire a feel for the life and flavor of a country within a limited period. Knowledgeable guides who speak good English provide interesting, useful information. In just six days in Japan on the popular "Orient Adventure," for example, the traveler can tour the city of Tokyo, visit beautiful Hakone National Park, spend a day at the famous mountain resort of Nikko, ride the 130 mph bullet train and tour the ancient capital city of Kyoto with its gardens and temples, and spend an exciting afternoon and evening at the Kabuki and Kokusai Theatres. Very importantly, the group travel program offers complete flexibility for shopping, for relaxation, and for permitting the individual to do just as he or she pleases.

The TMA group travel program also provides an opportunity for continuing medical education. Generally, six illustrated lectures are presented on each tour by physicians renowned in their countries. The Medical Seminars are scheduled in early morning or in the evening to complement the day's sight-seeing activities. Hospital or medical school tours also are included.

One of the most important advantages of group travel, of course, is economy. The two-week Orient Adventure, including chartered airline service, guest rooms at the New Otani Hotel in Tokyo and the famed Mandarin Hotel in Hong Kong, ground transportation between the hotels and the airports, and breakfast and dinner each day at a choice of excellent restaurants, costs less per person than commercial airfare alone from Dallas to Tokyo, Hong Kong, and return.

Not to be overlooked are many other features which contribute appreciably to the pleasure and comfort of travel. They include the complete handling of luggage with delivery directly to the hotel room, the clearing of customs in foreign countries, and ease in checking into and out of hotels. Hospitality desks for Association guests in headquarters hotels in each city provide useful information on places to visit, and reservations for restaurants and tours.

Asked how they would rate the TMA 1973 Orient Adventure this past fall, 120 Texas physicians and their spouses accorded it excellent ratings; 33 listed it as good. There were no fair or poor ratings.



Choloxin®

(sodium dextrothyroxine)

Once-a-day dosage.

See reverse side for full prescribing information and dosage schedule.

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Deerfield, Illinois 60015

Choloxin® (sodium dextrothyroxine)

The Lipid-Lowering Agent with Once-A-Day Dosage

Four strengths . . . 1, 2, 4, and 6 mg. . . . are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased by Increments of	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	monthly 1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	monthly 0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac Patients	0.5-1.0 mg.	monthly 1.0 mg.	4.0 mg.	4.0 mg.

Choloxin®

(sodium dextrothyroxine)

Description
CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as D-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions
The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications
This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXIN dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications
The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease: history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings
CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN. As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may be advisable to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age
Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions
It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions
The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN; a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration
For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN is approximately 0.1 mg per kilogram. The initial daily dosage should be approximately 0.05 mg per kilogram to be increased in up to 0.05 mg per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied
CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

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DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

MEDICINE AND THE LAW

FEDERAL COURT HOLDS TEXAS CATHOLIC HOSPITAL HAS RIGHT TO DENY HOSPITAL FACILITIES FOR STERILIZATION

A federal court holds that a private Catholic hospital in Texas may refuse to allow its facilities for use in a sterilization operation. In so doing the court said the fact that the Catholic hospital had received Hill-Burton Funds as well as other federal funds did not bring the doctrine of "state action" into being insofar as hospital policy and regulations were concerned.

FACTS: The plaintiff was a patient in the defendant's hospital, having suffered an accidental fracture of her thigh. At the time of the accident the plaintiff was late in her third trimester of pregnancy, expecting a multiple birth. In the early periods of her pregnancy she had agreed with her attending physician that she would undergo a tubal ligation for sterilization after delivery. The plaintiff was an unwed mother of two children, a welfare recipient, and subject to epileptic seizures. Because of her fractured thigh she was in traction. An orthopedic surgeon and her obstetrician had recommended a caesarean delivery and a tubal ligation during the same operation. The defendant hospital was an institution supported by a religious order of the Catholic church. The hospital received funds under the Hill-Burton Act, from the state and federal governments to build and construct its physical facilities, was licensed by the State of Texas, received and regularly applied for federal, state, and local governmental funds under welfare and similar programs, and was immune from income and local and state tax liability because of its charitable nature. The Sisters, holding the belief that sterilization was contrary to their religion, refused to allow their facilities to be used for such an operation. Citation for the case: *Allen vs. Sisters of St. Joseph, A Non-Profit Corporation,* 361 F. Supp. 1212 (U.S. Dist. Ct. Northern Dist. of Tex., Lubbock Div., June 13, 1973).

HOLDING: The court sustained the hospital's refusal to allow its facilities to be used for a tubal ligation even though it had received Hill-Burton funds, was licensed by the state, regularly received and applied for federal, state and local governmental funds from the welfare and similar programs, and was immune to tax liability because of its charitable nature. The court stated that, because of the above activities, the hospital did not act under the color of the law (the appearance or semblance without the substance of legal right) so as to give rise to a cause of action under the Civil Rights Act. Hospital and Medical Facilities Amendments of 1964, Sec. 600 etc. 42 U.S.C.A., Sec. 291; 42 U.S.C.A., Sec. 1983.

REASONING: On the basis of a US District Court case in Montana (*Taylor vs. St. Vincent Hospital*) the Lubbock court had originally granted a temporary injunction against the hospital from denying the plaintiff the use of the hospital for the performance of the tubal ligation. The court subsequently dissolved the temporary injunction on the basis of a case in 7th US Circuit Court of Appeals, *Doe vs. Blinn Memorial Hospital,* 479 F. 2d 756 (1973), which stated that no doubt the defendant hospital agreed to abide by a variety of regulatory terms related both to its operation and to the use of Hill-Burton funds in connection with its acceptance of benefits under the Act. There is no evidence, however, that any condition relating to the performance or nonperformance of abortions was imposed upon the hospital.

The court stated that although the *Doe* case involved an abortion procedure, the impact and holding of 7th Circuit was that acceptance of Hill-Burton funds does not automatically make the recipient an entity operating under the color of state law.

This court saw no distinction between abortion and sterilization insofar as the color of law question was concerned. The court held that the Hill-Burton funds, welfare receipts, licensing procedures, and similar matters alleged by the plaintiff to be the factors giving rise to the color of law action required by 42 U.S.C.S. 1983 were not suf-

ficient. The court further held that the defendant in this case was not operating under color of law so as to give rise to a cause of action.

The court stated that it should be noted that from the record in this case, and from the argument of counsel, it is obvious that the only reason for the sterilization was to prevent further pregnancies by the plaintiff. No medical reasons were assigned that would require or necessitate her sterilization in order to preserve her health or life. The court stated further that the plaintiff was not in such a position that she could never secure sterilization. She had the option of having the caesarean section and concurrent sterilization performed at another hospital within Lubbock, although this admittedly would not be practical and would require her physical removal from traction and transportation over several city blocks to the other hospital. However, she would have to be removed from traction even to be taken into the operating room in defendant's hospital for the caesarean section. Obviously, however, more risks and problems would be involved if she were to be removed to a separate hospital. The court found that there was no such an emergency existing or overriding interest of the plaintiff that would justify this court's intervention in the hospital's operating policies and regulations. "The interest that the public has in the establishment and operation of hospitals by religious organizations is paramount to any resulting inconvenience to the plaintiff in requiring her to either be moved or wait for a later date for her sterilization."

There have been several other cases not cited by the court relating to whether or not governing boards of hospitals, both private and public, can restrict the use of their facilities in relation to abortions and sterilization procedures. One such case decided by the First Circuit Court of Appeals, in March 1973, held that a city hospital may not constitutionally bar the use of its facilities for tubal ligations. The court did grant some leeway in that case by noting that the hospital could establish policy in relationship to its budget and its facilities and the abilities of its staff to curtail such activities. However in so doing, the court ruled that the city hospital may not impose complete bans on sterilization procedures.

CONCLUSION: This Texas case does provide some authority as to how courts would treat the denial of hospital facilities to a doctor and patient in relationship to abortion and sterilization procedures. However, undoubtedly this matter will not finally be determined until the Supreme Court of the United States clearly holds one way or the other in relationship not only to private hospitals but to public hospitals regarding the leeway hospital governing boards have to restrict the use of their facilities to preclude these particular medical procedures.

TMA Office of General Counsel
Ace Pickens

Personals

The Southern Medical Association (SMA) elected DR. JOHN J. HINCHEY of San Antonio as second vice president. DR. MARVIN E. CHERNOSKY was named president-elect of the Section on Dermatology of the SMA. Dr. Chernosky is clinical professor and director of the program in dermatology at The University of Texas Medical School at Houston. Also honored by the Southern Medical Association are DRS. GILBERT H. FLETCHER and STANLEY J. DUDRICK, both of Houston. Dr. Fletcher, head of radiotherapy at The University of Texas M. D. Anderson Hospital and Tumor Institute, received the association's award for original research. Dr. Dudrick, professor and director of the surgery program at The University of Texas Medical School at Houston, was given the Seale Harris Medal for outstanding contributions in the fields of metabolism, endocrinology and nutrition.

DR. BOEN L. SWINNY, JR., San Antonio, was elected executive secretary of the American Association for Clinical Immunology and Allergy. Dr. Swinny had served as president of the organization in 1971-72.

DR. ROBERT C. HICKEY of Houston has been elected chairman of the board of the American College of Surgeons. Dr. Hickey is director of The University of Texas M. D. Anderson Hospital and Tumor Institute.

The North Texas Chapter of American Academy of Family Physicians elected DR. JERRY B. HATHORN, Wichita Falls, president for 1974. Also elected were DR. LOUIS THEIMER, Wichita Falls, vice president; and DR. CLIFFORD BURROSS, Wichita Falls, secretary-treasurer.

Medicine in literature

Current Surgical Diagnosis and Treatment, ed 1, J Englebert Dumphy, Lawrence C Way and Associated Authors, 1108 pp, illus, Los Altos, Calif, Lange Medical Publications, 1973, $14.

In contrast to many "current" annual compilations of surgery summarizing surgical work by authors from many surgical centers over the country, this is a textbook of surgery presented by the staff of the University of California School of Medicine at San Francisco, with a few authors from other medical schools, chiefly at Stanford University School of Medicine, Palo Alto. "Current" perhaps relates to the fact that another edition is promised within two years. The editors have prepared this surgical text with the needs of both medical students and practicing surgeons in mind. It is well illustrated and operative techniques are shown. Brief, recent bibliographies follow each article. An appendix is included, listing the values, precautions, the physiological basis of the findings and interpretations of the various chemical constituents of blood and body fluid. There are also conversion tables in the apothecary and metric system for determination of body surfaces in children. In general, the articles are concise and well presented in an outline form so that a quick review of various entities is quite easily accomplished. The printing is smaller than perhaps some older surgeons would prefer. The book is a paper-back which offers the advantage of less weight for a volume of this size but would be perhaps less desirable for long-term use and for permanency in one's library.

A. O. SINGLETON, JR., MD
Galveston

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

C. F. Butler
Austin, 1919-1973

J. B. Copeland
Austin, 1904-1973

R. A. Kooken
Hamilton, 1908-1973

W. R. Lenox
Fort Worth, 1907-1973

M. Tatar
Pasadena, 1919-1973

D. D. Wall
San Angelo, 1902-1973

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

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Recent deaths

Dr. J. B. Copeland

Dr. Joseph Bryson Copeland, recently retired Deputy Commissioner of the Texas State Department of Health, died Oct 2, 1973, in an Austin hospital. He was 69 years old.

A native of Waynesboro, Ga, Dr. Copeland received his MD degree from Tulane University School of Medicine, New Orleans. Following an internship at Robert B. Green Memorial Hospital, San Antonio, he established a family practice in San Antonio. In 1963, he moved to Austin to assume the position of Deputy Commissioner of Health. He retired in 1973.

Dr. Copeland was founder and first president of the Texas Academy of Family Physicians, and is a past president of Bexar County Medical Society. A 40-year-member of Texas Medical Association, he served on the TMA's Board of Trustees for 11 years. He also served on the American Medical Association's Board of Trustees and was secretary-treasurer of the AMA.

He is survived by his wife, Melba Keeler Copeland, Austin; two sons, Joseph B. Copeland, Jr., Austin, and Dr. Oliver P. Copeland, Galveston; one daughter, Mrs. Kay Copeland Shultz, Austin, four stepchildren; one grandson; and one sister.

Dr. R. A. Kooken

Dr. Robert Andrews Kooken, age 65, died Oct 1, 1973. He had been a family physician in Hamilton since 1936.

A native of Hamilton, Dr. Kooken received an MD degree from Tulane University School of Medicine, New Orleans, and completed an internship at Parkland Hospital, Dallas. In 1936, he returned to Hamilton where he practiced as a family physician until 1970, when he retired from active practice. However, Dr. Kooken continued to give his time voluntarily to treating Indians in New Mexico and Arizona under project "Hope." Dr. Kooken also served as US Army flight surgeon in the North African and European theaters of World War II.

The physician was a member of Bosque-Hamilton County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Jane Cox Kooken, Hamilton; two daughters, Miss Julia Kooken, Sacramento, Calif, and Mrs. E. C. Green, Denison; one son, Robert Kooken, III, Sherman; and four grandchildren.

Dr. Copeland

Dr. Lenox

Dr. W. R. Lenox

Fort Worth family physician for 38 years, Dr. Walter Riley Lenox died Aug 23, 1973. Cause of death was renal failure.

Dr. Lenox received a BS degree from Texas Christian University, Fort Worth, and earned an MD degree in 1935 from Baylor College of Medicine. Following an internship at St. Joseph's Hospital, Fort Worth, and a two-year practice in Keller, Texas, Dr. Lenox moved to Fort Worth where he practiced medicine until his death.

Dr. Lenox was a member of Tarrant County Medical Society and Texas Medical Association, and was a fellow of American Academy of Family Physicians.

He is survived by his wife, Mamie Parnell Lenox, Fort Worth; one son, John Thomas Lenox, North Hollywood, Calif; and one sister, Mrs. Leslie P. Evans, Fort Worth.

Dr. Butler

Dr. C. F. Butler

Dr. Charles Frank Butler, Austin psychiatrist, died Nov 28, 1973, at the age of 54.

Dr. Butler graduated from The University of Texas at Austin with a BA degree. He received an MD degree from Faculty of Medicine, University of Edinburgh, Edinburgh, Scotland, and completed an internship at Brackenridge Hospital, Austin. Following a residency at Austin State Hospital, Austin, he joined its staff for the practice of psychiatry.

Dr. Butler was a member of American Psychiatric Association, Travis County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Betty Currey Butler; sons, Charles Frank Butler, Jr., and Jonathan Malcolm Butler; and daughter, Barbara Ann Butler, all of Austin.

Dr. M. Tatar

Pasadena family physician, Dr. Mervin Tatar died July 20, 1973. Myocardial infarction caused the death of the 53-year-old physician.

Born in Torras, La, Dr. Tatar received a BS degree from University of Southwestern Louisiana, Lafayette, La. His MD degree was earned at Louisiana State University School of Medicine, New Orleans, and he completed an internship at Lincoln Hospital, Bronx, NY. Dr. Tatar served with the US Navy for one year prior to returning to Lafayette where he completed a residency at Lafayette Charity Hospital. He moved to Pasadena in 1950.

Dr. Tatar held memberships in Harris County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Ruth Tatar; two sons, Steven Michael Tatar and Brett Gregory Tatar, one daughter, Sheryl Eileen Tatar; all of Houston; one brother and two sisters in Louisiana.

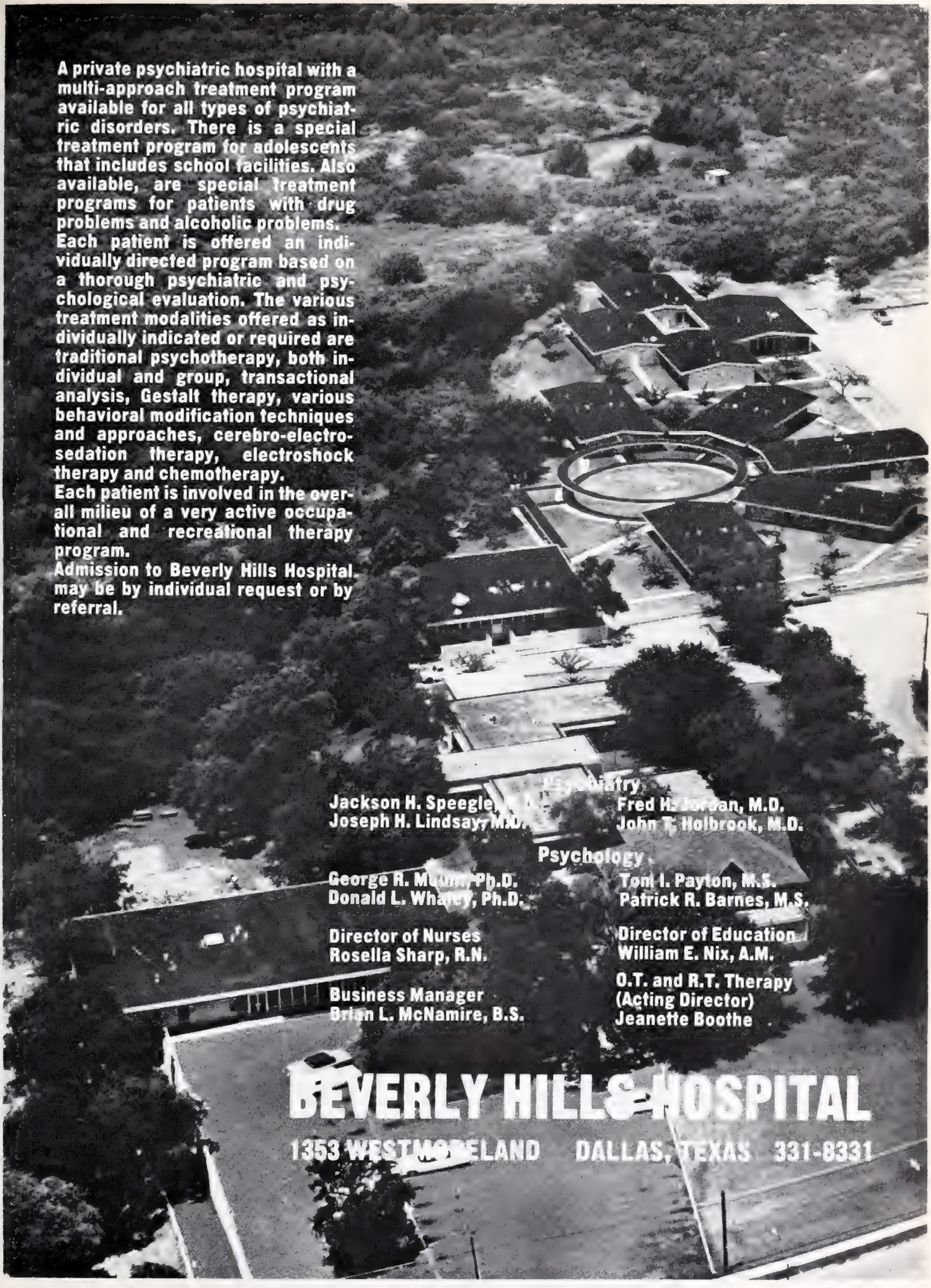
Dr. D. D. Wall

Dr. D. D. Wall, obstetrician and pediatrician in San Angelo since 1929, died Oct 6, 1973. He was 71 years old.

A native of Texas, Dr. Wall received a BA degree from Baylor University, Waco, and an MD degree from Baylor College of Medicine, Houston. He entered practice in San Angelo in 1929, and remained there until joining the US Medical Corps in World War II. During his military service, he did postgraduate work at Cook County Hospital, Chicago, and served in the South Pacific. In 1946, he returned to San Angelo where he continued in private practice until his retirement in 1963.

Dr. Wall was board certified by American Board of Obstetrics and Gynecology. He was elected to honorary membership in Texas Medical Association, and also held memberships in Tom Green Eight County Medical Society, American College of Surgeons, American College of Obstetricians and Gynecologists, and American Medical Association.

He is survived by his wife, Catherine Funk Wall, San Angelo; one son, Drew Joe Wall, Palmer; one daughter, Mrs. Kay Bates, San Angelo; two sisters; and four grandchildren.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Isidore Brodsky, M.D., Philadelphia, Pa.
INTERNAL MEDICINE

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ORTHOPEDIC SURGERY

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Russell N. DeJong, M.D., Ann Arbor, Mich.
NEUROLOGY

Eugene M. Farber, M.D., Stanford, Calif.
DERMATOLOGY

L. Russell Malinak, M.D., Houston, Tex.
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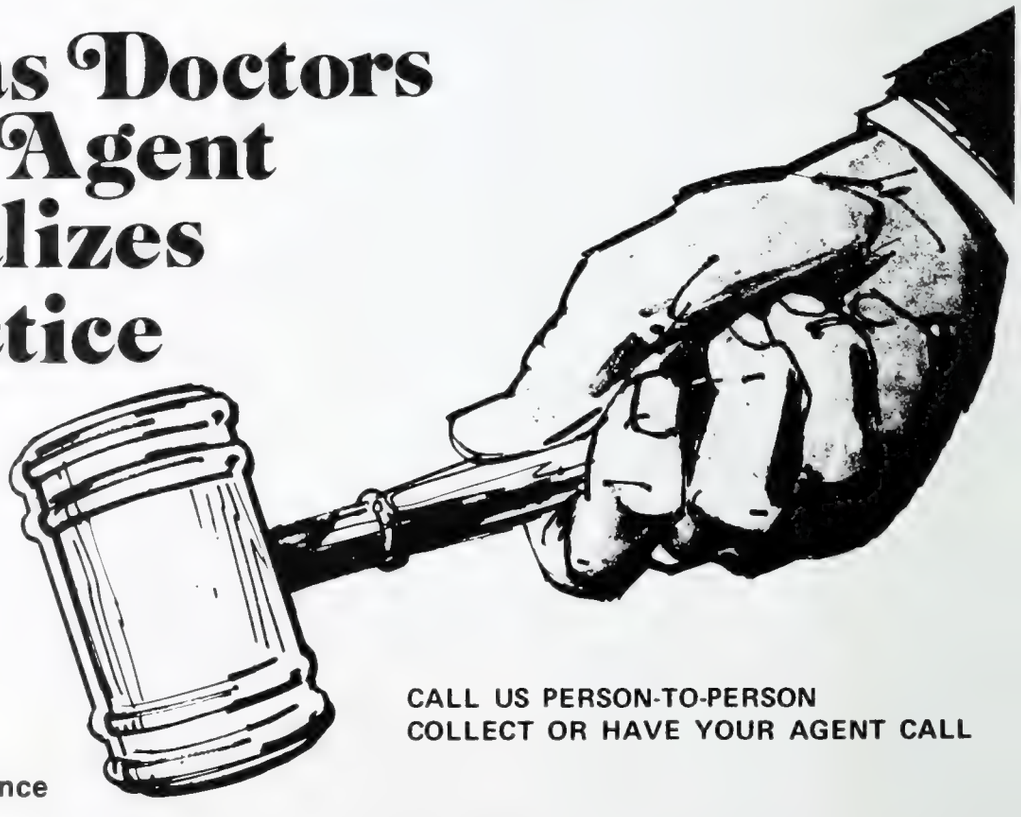

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20 CURBSTONE CONSULTATIONS
Person-to-person conversational discussions of cases and problems of general medical interest.

15 CONTINENTAL BREAKFAST PRESENTATIONS
Have breakfast with a guest speaker on Friday and Saturday mornings. Enjoy coffee and rolls while the speaker presents a 15 to 20-minute lecture. Then participate in the informal 35-minute open forum which will follow.

35 SPECIAL SOCIETY PROGRAMS

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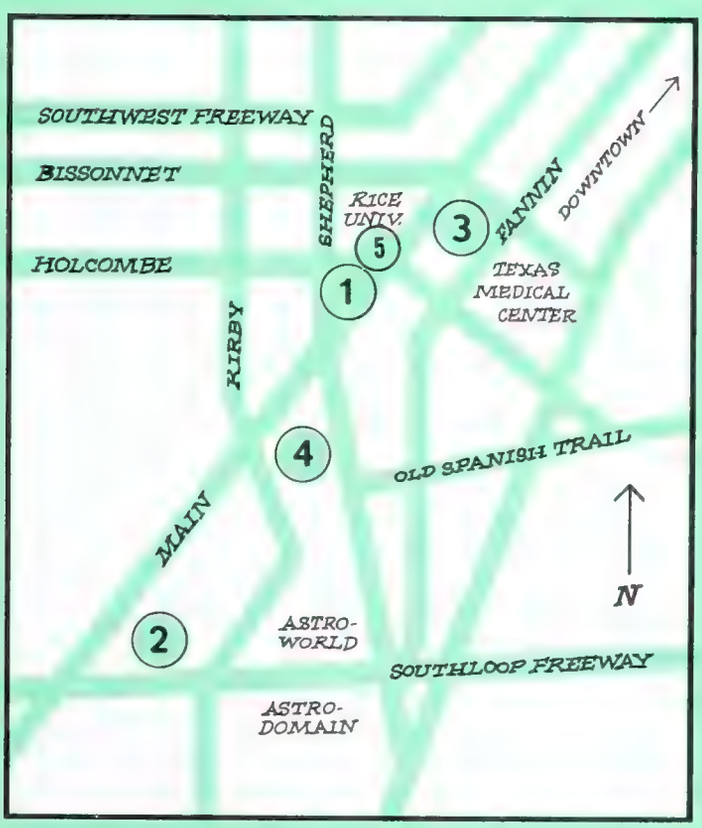

ANNUAL SESSION

MAY 9-12, 1974

HOUSTON

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Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions listed below. Fill out the advance ticket order form, mail it to TMA with your check, and your tickets will be waiting for you.

Friday, May 10, 12:30 p.m., Shamrock Hilton. Featured speaker will be Russell B. Roth, M.D., President, American Medical Association, Erie, Pennsylvania, who will discuss "Choosing the Legislative Rx for Medical Care."

Saturday, May 11, 12:30 p.m., Shamrock Hilton. Speaker pending.

WORLD—A gala evening is planned for you, featuring cocktails, dinner and dancing, Saturday, May 11.

TATIONS—Friday, May 10 and Saturday, May 11, 8:15-9:30 a.m., Shamrock Hilton. There is no charge, but attendance is limited and tickets necessary. Have coffee and rolls with a guest speaker, then participate in an informal discussion period.

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EDMUND KLEIN, M.D.
Buffalo, N.Y., dermatology (tumor immunology treatment and research)

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Kansas City, Kan., otolaryngology

CHARLES E. REED, M.D.
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F. P. RHOADES, M.D.
Detroit, Mich., family practice (geriatrics)

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Erie, Pa., President, American Medical Association

ARAN SAFIR, M.D.
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RICHARD D. SAUTTER, M.D.
Marshfield, Wisc., thoracic surgery

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Tampa, Fla., dermatology

JOSEPH P. WHALEN, M.D.
New York, N. Y., radiology

Friday, May 10, 8:15-9:30 a.m.

1. THE DOCTOR AS WITNESS
   Harold L. Engel, M.D., LL.B.
   Los Angeles, California

2. UROLITHIASIS
   Jay Y. Gillenwater, M.D.
   Charlottesville, Virginia

3. NEW IDEAS IN CONSERVATIVE MANAGEMENT OF LOW BACK PAIN
   Gerald G. Hirschberg, M.D.
   Berkeley, California

4. CURRENT CONCEPTS IN BURN MANAGEMENT
   John E. Hoopes, M.D.
   Baltimore, Maryland

5. IMMUNOTHERAPY OF CANCER
   Edward T. Krementz, M.D.
   New Orleans, Louisiana

6. HYPERTENSION
   William L. Morgan, Jr., M.D.
   Rochester, New York

7. THE "SICK" PHYSICIAN
   Rogers J. Smith, M.D.
   Portland, Oregon

Saturday, May 11, 8:15-9:30 a.m.

8. DEPRESSION IN THE NEWBORN
   David L. Barclay, M.D.
   Little Rock, Arkansas

9. BRITTLE DIABETES
   Buris R. Boshell, M.D.
   Birmingham, Alabama

10. THE PROTRUDING EYE
    Prof. dr. G. M. Bleeker
    Amsterdam, The Netherlands

11. BLOOD COMPONENT THERAPY, 1974
    Douglas W. Huestis, M.D.
    Tucson, Arizona

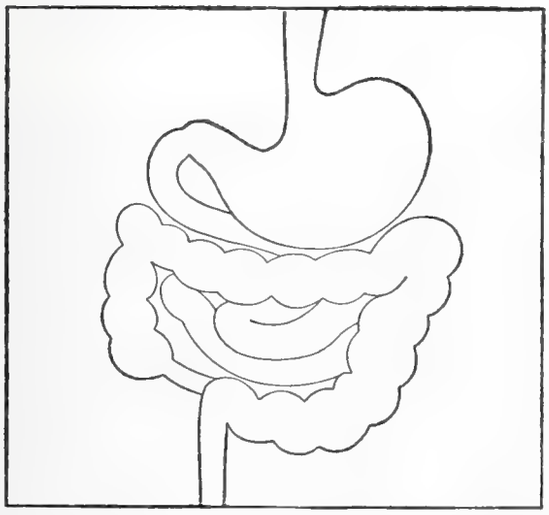
12. UROKINASE IN PULMONARY EMBOLISM (PANEL)
    W. G. Johanson, Jr., M.D., Dallas, Texas, Moderator; Kevin M. McIntyre, M.D., Boston, Massachusetts; Wil B. Nelp, M.D., Seattle, Washintgon; Richard D. Sautter, M.D., Marshfield, Wisconsin

13. MARITAL COUNSELING
    Donald G. Langsley, M.D.
    Sacramento, California

14. BLOOD AND GUTS—The Management of Acute GI Bleeding
    Charles E. Pope, II, M.D.
    Seattle, Washington

15. INFANT NUTRITION
    Nathan J. Smith, M.D.
    Seattle, Washington

in "Gasspastic" conditions



The GI tract in spasm is commonly a "gas trap."

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In addition to the traditional combination of belladonna alkaloids and butabarbital (warning: may be habit forming.), Sidonna contains simethicone—a non-systemic defoaming agent that "lyses" gas bubbles on contact.

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Contraindications: Anticholinergics should not be used in patients with glaucoma, known prostatic hypertrophy, or pyloric obstruction. Urinary retention may indicate the presence of prostatic hypertrophy. If it occurs, the dose should be reduced or the drug withdrawn. Also contraindicated in patients with known hypersensitivity to one of the components.
Side Effects: Dryness of the mouth, blurred vision, dysuria, skin rash, constipation or drowsiness may occur.

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What's on your patient's face...

may be more important than his chief complaint

Patient P.T.* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electrosurgical procedures.

Patient P.T.* seen on 6/12/67, seven weeks after discontinuation of 5% FU cream. Reaction has subsided. Residual scarring not seen except that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.

*Data on file, Hoffmann-La Roche Inc., Nutley, N.J

The lesions on his face are solar/actinic— so-called "senile" keratoses... and they may be premalignant.

Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics. The typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.

Sequence of therapy— selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; this reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

Acceptable results

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

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Description. Proloid (thyroglobulin) is obtained from a purified extract of frozen hog thyroid. It contains the known calorigenically active components, Sodium Levothyroxine (T_4) and Sodium Liothyronine (T_3). Proloid (thyroglobulin) conforms to the primary USP specifications for desiccated thyroid—for iodine based on chemical assay—and is also biologically assayed and standardized in animals.

Chromatographic analysis to standardize the Sodium Levothyroxine and Sodium Liothyronine content of Proloid (thyroglobulin) is routinely employed.

The ratio of T_4 and T_3 in Proloid (thyroglobulin is approximately 2.5 to 1.

Proloid (thyroglobulin) is stable when stored at usual room temperature.

Indications. Proloid (thyroglobulin) is thyroid replacement therapy for conditions of inadequate endogenous thyroid production: e.g., cretinism and myxedema. Replacement therapy will be effective only in manifestations of hypothyroidism.

In simple (nontoxic) goiter, Proloid (thyroglobulin) may be tried therapeutically, in nonemergency situations, in an attempt to reduce the size of such goiters.

Contraindication. Thyroid preparations are contraindicated in the presence of uncorrected adrenal insufficiency.

Warnings. Thyroglobulin should not be used in the presence of cardiovascular disease unless thyroid-replacement therapy is clearly indicated. If the latter exists, low doses should be instituted beginning at 0.5 to 1.0 grain (32 to 64 mg) and increased by the same amount in increments at two-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out before the drug is administered. If hypopituitarism is present, the adrenal deficiency must be corrected prior to starting the drug.

Myxedematous patients are very sensitive to thyroid and dosage should be started at a very low level and increased gradually.

Precaution. As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions. Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration. Optimal dosage is usually determined by the patient's clinical response. Confirmatory tests include BMR, T_3 ^{131}I resin sponge uptake, T_3 ^{131}I red cell uptake, Thyro Binding Index (TBI), and Achilles Tendon Reflex Test. Clinical experience has shown that a normal PBI (3.5-8 mcg/100 ml) will be obtained in patients made clinically euthyroid when the content of T_4 and T_3 is adequate. Dosage should be started in small amounts and increased gradually with increments at intervals of one to two weeks. Usual maintenance dose is 0.5 to 3.0 grains (32 to 190 mg) daily.

Overdosage Symptoms. Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

(Treatment: In shock, supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.)

How Supplied. ¼ grain; ½ grain; scored 1 grain; 1½ grain; scored 2 grain; 3 grain; and scored 5 grain tablets, in bottles of 100 and 1000.

Full information available on request.

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FR-GP-31-B/W

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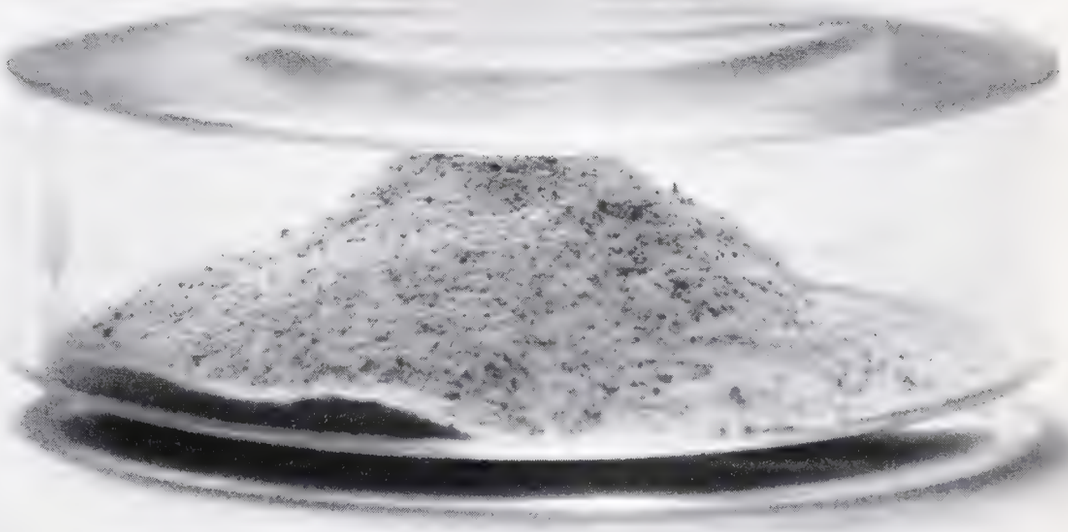
ARE PATIENTS GETTING THE POTENCY YOU PRESCRIBE?



Unlike U.S.P. desiccated thyroid, Proloid®(thyroglobulin) offers the assurance of constant potency.

To begin with, Proloid is uniquely purified. The thyroglobulin extracted from hog thyroid is devoid of any glandular debris.

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Important, too, is the fact that Proloid is invariably "fresh" when your patients take it. Under proper storage conditions, its potency will not diminish for at least four years.

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(thyroglobulin)

natural thyroid therapy that leaves nothing to chance

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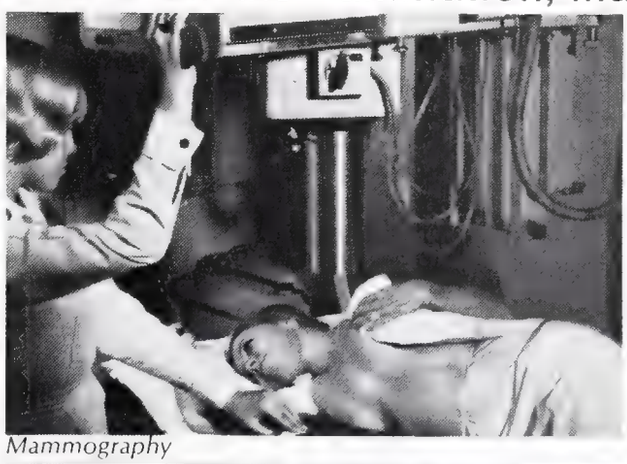
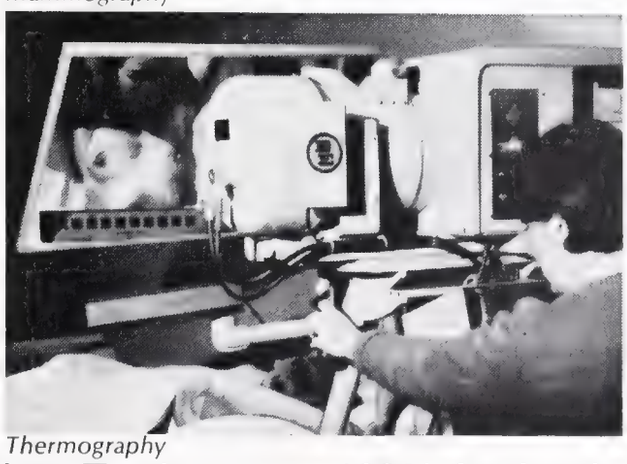
Futility and frustration beset the physician confronted with breast cancer. For the last 35 years, the survival rate has not significantly changed despite intensive educational programs aimed at earlier detection, and improvement in treatment techniques.

What is the outlook? We know the key to reducing mortality from breast cancer is in the *earliest possible* diagnosis. The stage at which breast cancer is detected is *crucial* to the outcome of treatment. By the time a lump is discovered through BSE or clinical examination, critical time may have been lost.



Mammography



Thermography

And we *do* have the means to achieve earlier diagnosis. We do have an *earlier* warning system. Mammography and thermography can detect breast cancer *before* a lump is discernible by palpation. To demonstrate that it is practical and feasible to detect breast cancer earlier by using these modalities, the American Cancer Society and the National Cancer Institute are funding a network of breast cancer demonstration projects. Supported by grants of $2-million from the ACS and $4-million from the NCI, 20 such centers are expected to be operative across the country by the end of the year. Each will screen at no charge, approximately 5,000 women annually, in what is considered to be the ideal detection program—to include clinical examination, mammography and thermography. Each of these detection methods contributes independently to the detection of breast cancer, and none can be dispensed with in the search for early disease.

At present we cannot prevent breast cancer, but the potential for saving more lives is immense. The five-year survival rate surges dramatically from 53% when axillary nodes are positive, to approximately 85% when the disease is localized, to nearly 100% for in-situ cancer.

We have an earlier warning system. Let's use it.

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FAMILY PRACTICE PHYSICIAN NEEDED to join a three man group doing general practice. New community hospital and new clinic building under construction now, modern golf course, large lake, excellent hunting, excellent schools with no busing and no integration problems. 90 minutes from Dallas-Fort Worth. No investment necessary. Salary first year negotiable, with partnership after one or two years if desired. Contact K. J. Wharram, M. D. or A. D. Major, M.D., Nocona, Texas 76255. AC 817-825-3371.

FAMILY PRACTICE, with two other physicians. 50 bed hospital adjacent to clinic. Two nursing homes located in town. Large patient drawing area, good fishing, hunting, 8 miles to Lake Whitney, excellent schools, churches, and progressive small town. Guaranteed salary until established, partnership available in future. Contact Morris R. Hill, M. D. or James G. Barton, M. D. at Barton & Hill Medical Association, P. O. Box 546, Whitney, Texas 76692; phone AC817-694-2221.

GENERAL PRACTICE—Family practice with two other practitioners. New 43 bed hospital. No investments, other benefits negotiable to your desires, equal privileges, excellent income assured. Contact M. H. Shankles, Administrator, Shamrock General Hospital, 1000 South Main, Shamrock, Texas 79079. Telephone AC806-256-2114.

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FAMILY PHYSICIAN: This is an opportunity you should look into. Three family practice physicians need fourth man. No capital outlay, equal privileges, no buy-in, guarantee until established, set your own pace. Clinic, 40-bed hospital, 44-bed extended care, accredited by JCAH. Contact Ray W. Freeman, M.D., Chief of Staff, or Gordon Russell, Administrator, Hi-Plains Hospital-Clinic, 203 West 4th, Hale Center, Texas 79041. Call 806, 839-2471.

NEEDED—INTERNIST TO ASSOCIATE with three busy GP's in Central Texas university town. No internist in area. Should be nice place to live and work. Please reply to Ad-457, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

THREE PHYSICIANS NEEDED. FAMILY PRACTICE PHYSICIAN, INTERNIST AND SURGEON needed to join a full time, five man clinic association group with part time radiologist and clinical pathologist in Clifton, Texas. Located in the heart of Texas, 35 miles NW of Waco, 15 miles from Lake Whitney. Good fishing, excellent hunting, new, recently completed, modern golf course. Excellent schools, churches and growing progressive small town. Closely associated with new 65-bed hospital facility, which is fully accredited by the Joint Commission. Suggest salary at first with partnership in future. Financial terms open. Please contact V. D. Goodall, M.D., Clifton Medical and Surgical Clinic Association, Clifton, Texas 76634. Telephone 675-8621 or 675-3113.

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PSYCHIATRIC RESIDENCY IN APPROVED 3-YEAR PROGRAM. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty and programs. Stipends with Texas license are $13,000, $14,000 and $15,000 per year. In addition, now offering residency in child psychiatry. For full information write to: Anthony P. Rousos, M.D., Director of Training and Research, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

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PHYSICIANS NEEDED—Staff physicians, general practitioners and/or board certified specialists to increase staff of Travis State School. Fringe benefits include 40-hour work week, vacation and sick leave. Present and projected salary increases make positions attractive. Texas license required. Contact Superintendent or Medical Director, Travis State School, P. O. Box 430, Austin, Texas 78767. Phone AC512-926-2410. An equal opportunity employer.

FAMILY PHYSICIAN OR GENERAL INTERNIST for group practice in attractive Central Texas town. Must have boards or be board eligible, under 35. Complete group will consist of 3 older GPs and 4 board certified younger men. Write O. W. Lowrey, M.D., Lowrey Clinic, Gatesville, Texas 76528, or phone collect AC817-865-2266.

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INTERNIST TO JOIN BUSY, ESTABLISHED, STILL-GROWING PRIVATE PRACTICE, Texas Medical Center. Associated Baylor and University of Texas Medical Schools. Philosophy of practice—high quality personal care. Superb, full diagnostic equipment and facilities. Outstanding quality personnel. Enjoyable and satisfying environment. Future partnership anticipated; beginning arrangements, mutually acceptable basis, dependent upon personal and professional qualifications. Leonard R. Robbins, M.D., Robbins Clinic, 2600 Southwest Freeway, Houston, Texas 77006. 713-529-7623.

URGENTLY NEEDED, BOARD CERTIFIED OR ELIGIBLE INTERNIST OR GENERAL PRACTITIONER for staff physician on medical service and a rehabilitation medicine physician in a 346-bed GM&S hospital located in the beautiful Texas Hill Country only 65 miles from San Antonio. Starting salary determined by training and experience. Excellent vacation and sick leave benefits, insurance, retirement and other fringe benefits. Please write or call Chief of Staff, VA Hospital, Kerrville, Texas 78028, telephone number 512-896-2020, Ext. 112. An equal opportunity employer.

WANTED: PHYSICIAN TO JOIN GENERAL SURGEON AND GENERAL PRACTITIONER in small town. Privately owned clinic and hospital combination. Guaranteed salary. Prefer family practice specialist. For additional information, please contact M. A. Childress, M.D., P.O. Box 289, Goldthwaite, Texas 76844; Phone 915-648-2212.

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GENERAL PRACTITIONER AND INTERNIST. Newly constructed multi-specialty 6-man clinic in West Texas city of 150,000. New 120 bed accredited hospital adjacent to clinic. Top salary with partnership opportunity in two years. Interested applicants send curriculum vitae to AD-483, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

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ALLERGIST—Board certified or eligible. Join growing solo practice North Central Texas. Salary, then full partnership association. 120,000 population, 300,000 drawing area. Excellent hospital facilities. Ideal family living. Send curriculum vitae with reply please. Hermann Gregory, M.D., 1310 Ninth Street, Wichita Falls, Texas 76301. 817-322-6926.

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OTOLARYNGOLOGIST, board eligible for 60-man multi-specialty clinic. Outstanding fringe benefits. Call or write James L. Smith, M.D., Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025. Phone 713-526-2671. URGENT.

OCCUPATIONAL MEDICINE—Primary care physicians, board qualified in internal medicine, occupational, preventive or aviation medicine, for primary care practice in large multi-specialty clinic. Texas Gulf Coast area, with numerous company accounts and university affiliation. Branch offices and proposed prepay health program and government contracts (no dual compensation involved for retired). Urgent. Write or call J. A. Bakken, Administrator, Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025. Phone 713-526-2671.

WANTED: FAMILY PHYSICIAN desiring full range of general practice to associate with three man family practice group. Will guarantee minimum and after established, will offer partnership. For more information, please contact University Park Clinic, Box 4109, Wichita Falls, Texas 76308 or call 817-692-2024 for Drs. Deets, Burross, or Dean.

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INTERNIST with subspecialty in either pulmonary disease or gastroenterology to associate with multi-specialty clinic, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

UROLOGIST to associate with multi-specialty clinic, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

RADIOLOGIST to associate with multi-specialty clinic, soon to be in new hospital with all new equipment; fringe benefits, good climate, good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

FAMILY PRACTITIONER to associate with multi-specialty clinic developing a special section on family practice, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

PATHOLOGIST to associate with multi-specialty clinic soon to be in new hospital with all new equipment; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

PHYSICIANS: 715-bed hospital with active medical, surgical, psychiatric services, is in need of general internist, hematologist-oncologist, urologist, and orthopedist, all preferably with certification. Excellent consultation, library, and continuing medical education. Close affiliation with Scott and White Hospital with sharing of house staff. Possible site for medical school. Salary competitive, ample vacation and sick leave, and fringe benefits. Equal employment opportunity agency. Apply Chief of Staff, VA Center, Temple, Texas 76501.

FULLY TRAINED PSYCHIATRISTS WANTED for progressive CMHC under sponsorship of Tarrant County Hospital District. Full-time openings available immediately in many areas, salary and fringe benefits competitive, must have or be eligible for Texas license. Contact Director, Department of Psychiatry, Tarrant County Hospital District, 1500 S. Main St., Fort Worth, Texas 76104.

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EMERGENCY ROOM PHYSICIAN. Full or part time in the beautiful, modern Hermann Hospital Emergency Room, Houston, Texas. Excellent resident/intern back up. Salary and benefits. Contact: E. R. Practice of Houston, 1203 Ross Sterling Avenue, Suite 120 Emergency Center, Houston, Texas 77025. 713-527-3685.

Situations Wanted

OPHTHALMOLOGIST, 33, board eligible, university trained, military completed, married, completing retina fellowship in June 1974. Seeking association, partnership, or group but will consider all opportunities. Please reply to Ad-477, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, board eligible, married. Desires to relocate practice in small town with good hospital. Prefer solo, good references, available anytime. Please reply to Ad-480, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EXPERIENCED CANADIAN OTOLARYNGOLOGIST wishes to relocate in Texas—preferably south or southwest. Will be available for an interview about January 20, 1974. Please reply to Ad-484, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST—BOARD ELIGIBLE AP&CP available July 1974. Age 35. Please reply to Ad-485, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OPHTHALMOLOGIST: Take your vacation relaxed. Board certified ophthalmologist will locum tenens your practice 4 to 6 weeks beginning middle of June 1974. Salary or percentage acceptable. Would consider staying on if practice volume warrants and only if desired by you. Please reply to Ad-488, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON—married, 37, board certified, FMG, Spanish speaking with extensive additional experience in large clinic in abdominal surgery seeks solo or associate practice. Any size community. Available January 1974. Please reply to Ad-487, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OPHTHALMOLOGIST, University trained, board certified, 44, married. Academic rank assistant professor, subspecialty ophthalmic plastic surgery, would like to relocate back home in Texas. Will consider solo, group, or straight employment. Have top-notch equipment. Naturally would prefer busy surgical practice, but willing to build it by hard work. Please reply to Ad-489, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

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SOUTHEAST MEDICAL CENTER has customized suites available for immediate occupancy, 100 feet from Southeast Baptist Hospital. Ideal location in established quadrant of San Antonio where no medical specialists are offered. Only 17 minutes by freeway from downtown. Contact Manager, 4242 East Southcross, San Antonio 78222. Phone 222-2103.

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X-RAY MACHINE FOR SALE—In good condition, Picker R 1 X-ray Generator 100 MA and 90 KVP, radiographic Century motor driven table. PX-3B stationary anode x-ray tube, wall cassette and holder. Miscellaneous cassettes and mobile lead shield. $1,000 or best offer. Contact Joseph S. Neigut, M.D., Suite 618 M&S Tower, San Antonio, Texas 78205. Telephone 512-226-5291.

BROWNSVILLE, TEXAS, fastest growing city in state, second in nation, will have available suite of 970 sq. ft. for rent starting April in Medical Arts Building. Contact owner, Hugh Emerson, D.D.S., 157 E. Levee, Brownsville, Texas 78520. Call 512-542-2537.

CLINIC—SAN ANGELO. Retiring physician and surgeon with $100,000 gross 1973, offers modern clinic and whatever equipment desired. For sale—$100,000. Buyer must be Texas licensed and have impeccable credentials. The clinic can accommodate two doctors. Terms. Dr. Robert Franken, P.O. Box 4066, San Angelo, Texas 76901.

FOR SALE: Deceased physician's fully equipped office for general practice in small southeast Texas city, population 9,000, county population 29,000; 20 minutes from Beaumont, Texas; near fishing recreation area; light industry; modern doctors hospital; modern convalescent center. Contact Mrs. W. J. Poshataske, John H. Hartman Road, Silsbee, Texas 77656 (AC713-385-2696).

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In one of the most desirable areas in the Texas Gulf Coast Area. Memorial City Professional Building, in the Memorial Drive-Spring Branch Area of Houston, Texas, has just completed a fifty-seven suite addition. The Professional Building now consists of one hundred twenty offices and is connected to a new two hundred thirty bed general hospital.

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Write or call Howard E. Troutt, Executive Director, Memorial City Medical Center, 902 Frostwood Drive, Suite 283, Houston, Texas 77024, (713) 464-2711.

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Dorsey Laboratories
Cama 10

El Paso Psychiatric Clinic 22

First Hair Transplant Symposium and Workshop 114

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Choloxin 97-98
Synthroid 20-21

Russell Grace Insurance
Malpractice Insurance 106

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Isordil 27

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Colace 55
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Kelsey-Seybold Clinic 61

Eli Lilly and Company
Ilosone 42

Marion Laboratories, Inc.
Nico-400 4-5

The Martin X-Ray and Radium Clinic 126

McNeil Laboratories
Butisol 73

Medical Arts Clinic of Corsicana 116

The Medical Protective Company
Malpractice Insurance 22

Memorial City Medical Center Houston 128

New Orleans Graduate Medical Assembly
37th Annual Meeting 106

The Pharmaceutical Manufacturers Association 40-41

William P. Poythress & Co., Inc.
URO-Phosphate 32

The Prudential Insurance Company of America
TMA Group Insurance Plan 9

Radiology Associates of Fort Worth 116

Reed & Carnrick
Sidonna 111

Roche Laboratories
Dalmane 38-39
Efudex 112-113
Gantanol 74-76
Librium 1-2
Valium 132-133

Scott and White Clinic Back Cover

Searle Laboratories
Lomotil 66-67

Seaview Hospital 30

Starlite Village Hospital 126

Texas Medical Association
Annual Session 68, 107-110
Memorial Library 114
Memorial Library Fund 102
South American Adventure 19

Timberlawn Psychiatric Hospital Back Cover

Torbett, Hutchings, Smith Memorial Hospital 2nd Cover

Travis Clinic Foundation and Travis Clinic Association 116

The Upjohn Company
Trobicin 16-17

Wallace Pharmaceuticals
Rondomycin 30-31

Warner/Chilcott
Proloid 114-115

Wichita Falls Clinic-Hospital 12

Physicians' Directory 118-126

Classified Advertisements 127-128

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Editorials

PRACTICING PHYSICIANS NEED LIFELONG EDUCATION

Whatever else a medical student's responsibility may be, he or she must acquire the basic knowledge and skills upon which a lifetime of medical education may be built.

If the increasing demand for, and participation in, continuing education courses is the measure, then the physicians in practice today must have fulfilled that responsibility.

The Directory of Continuing Education Courses for Texas Physicians (pp D1-D24) illustrates the growing educational opportunities. When first published in 1971, it listed 43 courses; this fourth directory lists 156. Also included in this year's directory are 52 medical meetings scheduled in Texas this year. The Texas Regional Medical Program, Inc., is making reprints of the directory available to all physicians in Texas.

Already a great many Texas physicians voluntarily seek to increase their knowledge of their own specialties or of related fields of practice. This trend was confirmed in a December 1972 survey carried out by the TMA's Committee on Continuing Education.

More than 2,000 Texas physicians responded to the survey, indicating that they already were participating in a wide variety of continuing education activities.

Although the TMA does not endorse compulsory continuing education requirements for membership or for relicensure, it does favor voluntary and varied forms of continuing education for all members.

The American Medical Association has been encouraging state institutions to develop their own accreditation programs for local institutions, and at least 18 states are proceeding with such accreditation programs.

With the approval of the TMA House of Delegates, the Committee on Continuing Education is going ahead with a pilot survey of a few continuing education institutions within the state. The purpose is to find out whether or not it would be practicable to offer an accreditation program for such institutions.

Another aspect of bringing practicing physicians and new ideas together involves the mechanics and logistics of doing so. The practitioner can't always be at the place where there are courses he needs, nor can his choice of courses be transported in toto to his place of practice.

What forms of education, then, are both useful and acceptable to the practitioner, and capable of being prepared and delivered by the institutions? The TMA Committee seeks answers. It is studying the activities already under way in Texas medical schools with an eye toward cost, manpower, and staffing. Most of these activities center around the use of television and similar mechanisms for continuing education of physicians.

The upsurge of interest in continuing education has resulted directly from the individual physicians who, recognizing their need, have in effect told their alma maters, their professional organizations, and their local medical institutions and hospitals, "We have to keep up with advances in medical science, and we have to take care of our patients while we're doing it. What can we work out?"

The TMA offers a multitude of opportunities for learning at each annual session in a direct effort to meet the physicians' educational needs. Through its Council on Medical Education and Committee on Continuing Education, it constantly seeks more and better ways to help physicians grow in their self-chosen lifetime of learning.

PHYSICIAN MUST HAVE FREEDOM TO PRESCRIBE AS HE THINKS BEST

Currently, the Senate Committee on Labor and Public Welfare's Subcommittee on Health is holding hearings on drugs. Part of their interest has arisen from the Final Report of the HEW Task Force on Prescription Drugs which, if put into effect, could limit the choices available to

the physician in prescribing drugs for his patients. Side effects, dosage, therapeutic effectiveness, cost, and physicians' sources of knowledge of drugs on the market were among the concerns cited in the report.

The development of drugs which have fewer adverse side effects might reduce the problem of iatrogenic diseases and would add to the pharmaceutical armamentarium. However, biological and pharmacological research has grown more expensive as it has grown more sophisticated. But if the costs of research continue to grow and the sources of funding for research continue to diminish, the future is clouded. The reduction in research support is highlighted by recent consideration for a reduction in training support for NIH, which could have an adverse effect on the supply of trained research investigators for industry, academia, and government.

The availability of fewer investigators during this period, when the amount of experimental data required and the time needed for FDA to evaluate that data is greatly increased, causes us great concern. The complexity of FDA procedures is a result of a sincere desire to protect the public. However, the system is becoming self defeating, and some new approaches are required if we are to be able to provide new and useful therapeutic agents.

One area of medical practice needs special emphasis at this time: The physician must be able to prescribe the drug in the dosage and strength deemed appropriate for his patient. While not infallible, the attending physician is in the best position to make decisions regarding the treatment of his individual patients. Yet, the present environment suggests a trend toward allowing the physician less latitude. This shortsightedness, if it continues, will be costly to the nation's health.

Indeed, there is no single "drug of choice" for any disease that can be tolerated by everyone, much less be effective in all people. Individual patients require individual decisions regarding therapy. For this reason and others, the AMA is opposed to formularies that would restrict the physician's choice of therapeutic agents to a selected list of drugs. While drug formularies of varying types are used in many areas, the anticipated reduction in costs of prescription drugs to patients as a result of these formularies may not occur universally. Formularies prepared by physicians and pharmacists for individual clinics and hospitals may be useful. But extending a strict application of a local formulary to the nation would not be in the best interests of patient care and would limit the effective use of available pharmaceutical agents.

Further, it has been amply demonstrated that stability, bioavailability, taste, appearance, and patient acceptability often vary from one commercial preparation to another. Where appropriate, we believe the physician should prescribe the least expensive product; however, the generic name on the bottle is not a guarantee of equivalence, nor for that matter does a generic prescription even guarantee to the patient that he will receive the least expensive product. For various reasons, therefore, we believe it is imperative that the physician be free to prescribe using a generic or brand name designation, but at the same time we have urged physicians to take into account the cost as well.

Similarly, the AMA appreciates the role of the package insert as a document to regulate drugs in commerce and to control the advertising claims made for drugs. Nevertheless, this labeling device does not encompass all that is known or even all that is published about a drug, and is not the best source of current information. The package insert should not be construed as a mechanism for regulating medical practice. A physician exercises his knowledge for the benefit of each individual patient, and the physician who must bear the responsibility for the treatment must not be restricted by limited package insert information.

The AMA has assisted and cooperated with the FDA in the discharge of its complex duties. We will continue to do so to the end that through the cooperative efforts of government, industry, and the professions existing problems may be resolved in a manner reflecting the best interests of the patient. We believe that the views of practicing physicians should play a large role in the decisions vitally affecting medical practice and patient care. As an example, AMA and FDA are cooperating in a program to develop recommendations on antibiotic therapy, and we expect these cooperative endeavors to continue and grow. We believe that Congress should be encouraged to increase budgetary support for the FDA so the agency will have adequate resources to carry out its mission.

James H. Sammons, MD, Baytown,
AMA Board of Trustees.

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

When you determine that the depressive symptoms are associated with or secondary to predominant anxiety in the psychoneurotic patient, consider Valium (diazepam) in addition to reassurance and counseling, for the psychotherapeutic support it provides. As anxiety is relieved, the depressive symptoms referable to it are also often relieved or reduced.

The beneficial effect of Valium is usually pronounced and rapid. Improvement generally becomes evident within a few days, although some patients may require a longer period. Moreover, Valium (diazepam) is generally well tolerated. Side effects most commonly reported are drowsiness, ataxia and fatigue. Caution your patients against engaging in hazardous occupations or driving.

Frequently, the patient's symptoms are greatly intensified at bedtime. In such situations, Valium offers an additional advantage: adding an *h.s.* dose to the *b.i.d.* or *t.i.d.* schedule can relieve the anxiety and thus may encourage a more restful night's sleep.

symptom complex to Valium® (diazepam)

Precautions: If combined with ther psychotropics or anticonvul- ants, consider carefully pharma- ology of agents employed; drugs uch as phenothiazines, narcotics, arbiturates, MAO inhibitors and ther antidepressants may poten- iate its action. Usual precautions ndicated in patients severely de- ressed, or with latent depression, r with suicidal tendencies. Observe sual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Valium® 2-mg, 5-mg, 10-mg tablets
(diazepam)

Phase IV Controls Affect Hospitals

At the recent American Medical Association Clinical Convention in Anaheim, Calif, Mr. John Kauffman, chairman of the American Hospital Association's Board of Trustees, spoke about the effect of phase IV economic controls as they affect hospitalization. He referred to the revenue and expense per admission approach which the Cost of Living Council (COLC) wished to impose on all hospitals effective Jan 1, 1974. This, in effect, states that every hospital would be paid in 1974 on the average cost per admission, the sum to be based on the average cost per admission in that institution in 1973, plus 7½%. There is no allowance made for new or more intensive therapy, no allowances for changes in patient mix, and no allowances for any new services offered. This also would prevent the development of new facilities and purchases of new equipment, and reduce the number of employees to curb costs. The American Hospital Association has informed the COLC that the proposed scheme, which is totally untried, "would unlawfully and unwisely insinuate the Cost of Living Council into the practice of medicine." These regulations would arbitrarily limit the quality and quantity of hospital care available to sick people. As was said in the formal petition to the COLC, "the Cost of Living Council lacks both the expertise and the legal authority to regulate medical practice." Nevertheless, the COLC proposes to make medical judgments in wholesale fashion. It proposes an across-the-board ruling that more inpatients should be treated as outpatients, and that inpatients should receive less intensive care than they are now receiving. The COLC expressly concedes that the proposed regulations are designed to bring about a substitution of outpatient treatment and a lessening in the intensity of inpatient hospital care." The studies of these regulations indicate that at least 50% of hospitals at the present time would not be in compliance with the regulations. Also, the AHA has asked for a public hearing, but it is their understanding that the request is being denied because the COLC believes it would set an unfortunate precedent.

A private hearing has been promised, and the American Medical Association is joining the AHA at that meeting to express the physicians' opposition to these arbitrary regulations.

The AHA has put the COLC on notice, but if the regulations are not modified they will fight them in court, in Congress, and in the public arena. The records during the earlier phases clearly indicate that the medical profession and health care providers desire to help curb inflation, and our records contain nothing that would justify the imposition of a radical new system on the health care industry—a system which puts economic caps on the quality and quantity of care. Each physician in Texas should do everything in his power to help reverse the capricious decision of the COLC. We should marshall all resources in joining the fight with the AHA and the Texas Hospital Association in contacting the bureaucracy in the Department of Health, Education, and Welfare, the COLC, and each of our elected Representatives. We must join with the Texas Hospital Association in adding our voices in opposition to these most unfair regulations.

Charles B. Dryden M.D.

Charles B. Dryden, MD, President,
Texas Medical Association

Texas continuing education directory for physicians '74

Published by Texas Medical Association
and
Regional Medical Program of Texas

1974
Texas continuing education directory for physicians

This directory of Continuing Education Courses for Texas physicians, the fourth annual directory to be published in TEXAS MEDICINE, lists 156 courses and 52 medical meetings scheduled in the state this year. The first directory, printed in 1971, listed 43 continuing education courses.

Medical schools and centers sponsored or co-sponsored 126 courses; specialty societies, national and state institutions, and associations, 23 courses; hospitals, 13 courses; and a Dallas institution, 6 courses.

Courses contained in this directory are listed alphabetically by subject. Courses which may be listed under more than one subject are cross-referenced as requested by course sponsors.

A calendar index by month is carried on page D20 and all known major medical meetings scheduled in Texas for physicians during 1973 are listed on pages D22-23.

The directory was compiled and prepared by the TEXAS MEDICINE staff as part of the Texas Medical Association's continuing education services approved by the Committee on Continuing Education. The Texas Regional Medical Program, Inc., is making reprints of this directory available to all physicians in Texas.

Institutions or organizations who wish to be listed in future directories should contact Ms. Jean White, TEXAS MEDICINE, 1801 N. Lamar Blvd., Austin 78701 by Sept. 30, 1974.

ANESTHESIOLOGY

TITLE:
Practical Respiratory Therapy and Evaluation of Patients

SPONSORS:
UT Medical Branch at Galveston

LOCATION OF COURSE:
UT Medical Branch at Galveston

DATE:
February 11-13, 1974

DURATION:
Continuous: 3 days; 18 total course hours

FEE:
$75

CREDIT:
18 hours AAFP

ENROLLMENT:
Minimum 50, maximum 200

TEACHING METHODS:
Enrollee observes procedure, enrollee performs procedure, seminar

CONTACT:
Dr. S. R. Lewis, Director, Postgraduate Division, UT Medical Branch, Galveston 77550

TITLE:
Anesthesia for Open Heart Surgery

SPONSORS:
Texas Heart Institute; Baylor College of Medicine, Houston

LOCATION OF COURSE:
Texas Heart Institute, 6720 Bertner, Houston

DATE:
April 4-6, 1974

DURATION:
Continuous: 3 days; 18 total course hours

FEE:
$75

CREDIT:
None

DESIGNED FOR:
Anesthesiologists

ENROLLMENT:
Unlimited

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, lecture, open question, panel

CONTACT:
Dr. A. Romagnoli, Assistant Professor, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Preceptorship in Anesthesiology

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
To be arranged

DURATION:
To be arranged

FEE:
To be negotiated individually

CREDIT:
AAFP; Category I, AMA Physician's Recognition Award

TEACHING METHODS:
Bedside rounds, enrollee observes procedure, enrollee performs procedure, laboratory work

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Anesthesiology Preceptorship

SPONSORS:
UT Southwestern Medical School at Dallas

LOCATION OF COURSE:
A. Webb Roberts Center, Dallas

DATE:
By arrangement

DURATION:
By arrangement

TEACHING METHODS:
Bedside rounds, enrollee observes procedure, enrollee performs procedure, laboratory work

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Recent Advances in Anesthesiology (See GENERAL MEDICINE)

BASIC SCIENCES

TITLE:
Biochemistry Seminar

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
January-June, 1974

DURATION:
Intermittent: 19 days; 19 weeks; 1 hour instruction per day; 19 total course hours

FEE:
None

TEACHING METHODS:
Audiovisual materials, lecture, seminar

CONTACT:
Dr. Salih J. Wakil, Chairman, Dept. of Biochemistry, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Summer Workshop in Biophysics and Its Physiological Applications

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
First quarter, 1974

DURATION:
Continuous: 5 days per week; 6 weeks; 8 hours instruction per day

FEE:
$400

CREDIT:
Not determined

ENROLLMENT:
Maximum 75

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, enrollee performs procedure, laboratory work, lecture, open question, seminar, programmed instruction, television

CONTACT:
Robert L. Vick, Ph.D., Professor of Physiology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Vector Analysis of the Electrocardiogram

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
First quarter, 1974

DURATION:
Intermittent: 14 days; 1 hour instruction per day; 14 total course hours

FEE:
None

CREDIT:
Not determined

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, enrollee performs procedure, laboratory work, lecture, open question, programmed instruction, seminar, television

CONTACT:
Robert L. Vick, Ph.D., Professor of Physiology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Lectures on the History of Medicine

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
First quarter, 1974

DURATION:
Intermittent: 11 days; 11 weeks; 1 hour instruction per day; 11 total course hours

FEE:
None

CREDIT:
Not determined

ENROLLMENT:
Maximum 100

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, enrollee performs procedure, laboratory work, lecture, open question, programmed instruction, seminar, television

CONTACT:
Robert L. Vick, Ph.D., Professor of Physiology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Review of Current Pharmacology

SPONSORS:
UT Southwestern Medical School at Dallas

LOCATION OF COURSE:
Methodist Hospital, Dallas

DATE:
February 6, 13, 20, 27, 1974

DURATION:
Intermittent: 4 days; 4 weeks; 1 hour instruction per day; 4 total course hours

TEACHING METHODS:
Lecture

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Symposium on the Application of Nutrition in the Health Sciences

SPONSORS:
UT Health Science Center at Houston; Texas Medical Center

LOCATION OF COURSE:
Jesse H. Jones Library Building, Houston

DATE:
February 8-9, 1974

DURATION:
Continuous: 2 days

FEE:
$25

ENROLLMENT:
Unlimited

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
The Role of Basic Science in Therapeutic Decisions

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
October 9-November 13, 1974

DURATION:
Intermittent: Each Wednesday, 1:30-4 p.m.; 15 total course hours

FEE:
$100

CREDIT:
15 prescribed hours AAFP; Category 1, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 10, maximum 30

TEACHING METHODS:
Audiovisual materials, laboratory work, lecture, open question, seminar

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Research Projects and Reading Courses in Cardiovascular, Respiratory, Neuro and Endocrine Physiology

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
To be arranged

DURATION:
To be arranged

FEE:
None

CREDIT:
Not determined

ENROLLMENT:
Maximum 10

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, enrollee performs procedure, laboratory work, lecture, open question, programmed instruction, seminar, television

CONTACT:
Robert L. Vick, Ph.D., Professor of Physiology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Applied Biophysics

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
To be arranged

DURATION:
To be arranged

FEE:
None

CREDIT:
Not determined

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, enrollee performs procedure, laboratory work, open question, programmed instruction, seminar, television

CONTACT:
Robert L. Vick, Ph.D., Professor of Physiology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Exercise Physiology in Heart Disease

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
To be arranged

DURATION:
To be arranged

FEE:
None

CREDIT:
Not determined

ENROLLMENT:
Maximum 25

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, enrollee performs procedure, laboratory work, lecture, open question, programmed instruction, seminar, television

CONTACT:
Robert L. Vick, Ph.D., Professor of Physiology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
11th Symposium on Biomathematics and Computer Science in the Life Sciences

SPONSORS:
UT Health Science Center at Houston; M. D. Anderson Hospital and Tumor Institute, Houston

LOCATION OF COURSE:
Not determined

DATE:
Not determined

DURATION:
Continuous

FEE:
Not determined

ENROLLMENT:
Unlimited

TEACHING METHODS:
Audiovisual materials, lecture, panel, open question

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

CARDIOVASCULAR DISEASE

TITLE:
Cardiologic Perspectives for the Internist—1974

SPONSORS:
Baylor College of Medicine, Houston; American College of Physicians

LOCATION OF COURSE:
Jesse H. Jones Library Auditorium, Texas Medical Center, Houston

DATE:
February 27-March 1, 1974

DURATION:
Continuous: 3 days; 6 hours instruction per day; 18 total course hours

FEE:
$100 ACP members, residents, and research fellows; $50 ACP associates; $150 nonmembers

CREDIT:
18 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 100, maximum 200

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, enrollee performs procedure, lecture, open question, panel

CONTACT:
Miss M. H. Jackson, Postgraduate Courses, American College of Physicians, 4200 Pine St., Philadelphia 19104

TITLE:
Clinical Cardiology Course

SPONSORS:
UT Health Science Center at Houston

LOCATION OF COURSE:
UT Health Science Center at Houston

DATE:
March 20-December 4, 1974

DURATION:
Intermittent

FEE:
Not determined

TEACHING METHODS:
Lecture

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
Texas Academy of Family Physicians, Permian Basin Chapter, Spring Seminar

SPONSORS:
Texas Academy of Family Physicians, Permian Basin Chapter; American Heart Association

LOCATION OF COURSE
Indian Mountain Lodge, Davis Mts. State Park, Fort Davis

DATE:
March 29-30, 1974

DURATION:
Continuous: 2 days

FEE:
$25

CREDIT:
6 prescribed hours TAFP

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel, seminar

CONTACT:
Dr. Wm. Bart Pate, 202 N. Second St., Alpine, Tex 79830

TITLE:
Texas Heart Institute Fifth Annual Symposium

SPONSORS:
Texas Heart Institute

LOCATION OF COURSE:
Texas Children's Hospital Auditorium, Houston

DATE:
May 30-June 1, 1973

DURATION.
Continuous: 2 days; 16 total course hours

FEE:
$50

CREDIT:
16 elective hours AAFP

ENROLLMENT:
Maximum 250

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel, programmed instruction, seminar, television

CONTACT:
Dr. Robert J. Hall, Medical Director, Texas Heart Institute, One Bates Ave., Houston 77025

TITLE:
Cardiac Drugs—A Therapy Seminar; Evaluation of the Patient with Coronary Artery Disease

SPONSORS:
American Heart Association, Texas Affiliate, Inc., Austin; UT Southwestern Medical School at Dallas

LOCATION OF COURSE:
Sheraton Fort Worth Hotel, Fort Worth

DATE:
June 21, 1974

DURATION:
Continuous: 1 day; 7 total course hours

FEE:
Not determined

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel, seminar

CONTACT:
Dudley H. Hafner, Executive Director, American Heart Association, Texas Affiliate, Inc., PO Box 9928, Austin 78766

TITLE:
Clinical Cardiology for the Practicing Physician

SPONSORS:
UT Southwestern Medical School at Dallas

LOCATION OF COURSE:
A. Webb Roberts Center, Dallas

DATE:
By arrangement

DURATION:
Intermittent: 1 month

FEE:
$75

TEACHING METHODS:
Bedside rounds, lecture, programmed instruction

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School at Dallas, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Advanced EKG Course (See INTERNAL MEDICINE)

CHEST DISEASE

TITLE:
Respiratory Diseases

SPONSORS:
UT Health Science Center at Houston

LOCATION OF COURSE:
UT Health Science Center at Houston

DATE:
April 30-May 21, 1974

DURATION:
Intermittent: 4 days; 4 weeks; 2 hours instruction per day; 8 total course hours

FEE:
Not determined

CREDIT:
AAFP

ENROLLMENT:
Unlimited

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

DERMATOLOGY

TITLE:
Dermal Pathology

SPONSORS:
UT Health Science Center at Houston

LOCATION OF COURSE:
UT Health Science Center at Houston

DATE:
August 19-23, 1974

DURATION:
Continuous: 5 days

FEE:
Not determined

TEACHING METHODS:
Lecture

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

ENDOCRINOLOGY

TITLE:
Endocrine Vignettes

SPONSORS:
UT Health Science Center at Houston

LOCATION OF COURSE:
UT Health Science Center at Houston

DATE:
May 7-28, 1974

DURATION:
Intermittent: 4 days; 4 weeks; 2 hours instruction per day; 8 total course hours

FEE:
Not determined

TEACHING METHODS:
Lecture

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
The Endocrinology of Subjects with Physiological Transection of the Cervical Spinal Cord

SPONSORS:
Baylor College of Medicine, Houston; Texas Institute for Rehabilitation and Research

LOCATION OF COURSE:
Texas Institute for Rehabilitation and Research, 1333 Moursund, Houston 77025

DATE:
To be arranged

DURATION:
Intermittent: 5 days; 5 weeks; 1 hour instruction per day; 5 total course hours

FEE:
$25

TEACHING METHODS:
Lecture

CONTACT:
Charles R. Poor, Texas Institute for Rehabilitation and Research, PO Box 20095, Houston 77025

GASTROENTEROLOGY

TITLE:
William Beaumont Gastrointestinal Symposium

SPONSORS:
William Beaumont Army Medical Center, El Paso

LOCATION OF COURSE:
William Beaumont Army Medical Center, El Paso

DATE:
March 13-15, 1974

DURATION:
Continuous: 3 days; 4 hours instruction per day; 12 total course hours

FEE:
None

CREDIT:
None

DESIGNED FOR:
Gastroenterologists and gastrointestinal surgeons

ENROLLMENT:
Minimum 100, maximum 350

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel, seminar

CONTACT:
Col. J. Loren Pitcher, Chief, Department of Medicine, and Chief, Gastroenterology Service, William Beaumont Army Medical Center, El Paso 79920

TITLE:
Preceptorship in Gastroenterology
(See GENERAL MEDICINE)

TITLE:
Current Problems in Liver Disease
(See PATHOLOGY)

GENERAL MEDICINE

TITLE:
Therapeutics Seminars

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
Telephone hook-up to 57 hospitals in Texas, New Mexico, Oklahoma, Arkansas, and Louisiana from UT Health Science Center at San Antonio

DATE:
January 3-December 19, 1974 (Except June-August) (Alternating Thursdays, 12:30-1:30 p.m.)

DURATION:
Intermittent

FEE:
Paid by hospital

CREDIT:
18 prescribed hours AAFP; Category I, AMA Physician's Recognition Award

TEACHING METHODS:
Audiovisual materials, clinical conference, open question, panel, seminar, telephone

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
History and Philosophy of Medicine

SPONSORS:
UT Southwestern Medical School at Dallas

LOCATION OF COURSE:
A. Webb Roberts Center, Dallas

DATE:
January 17-18, 1974

DURATION:
Continuous: 2 days; 4 hours instruction per day; 8 total course hours

FEE:
None

TEACHING METHODS:
Lecture, open question, seminar

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Practical Genetics for the Family Physician

SPONSORS:
American Academy of Family Physicians; National Foundation-March of Dimes

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
January 26, 1974

DURATION:
Continuous: 1 day

FEE:
$15

CREDIT:
6 prescribed hours AAFP

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Dr. Arthur Beaudet, Director, Birth Defects Center, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Monthly Lectures

SPONSORS:
Central Academy of General Practice; UT Southwestern Medical School at Dallas

LOCATION OF COURSE:
Nick's Restaurant, Waco

DATE:
3rd Wednesday of each month

DURATION:
Intermittent: 1 day per month

TEACHING METHODS:
Lecture

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Monthly Meeting of East Texas Academy of Internal Medicine

SPONSORS:
East Texas Academy of Internal Medicine; UT Southwestern Medical School at Dallas

LOCATION OF COURSE:
Medical Center Hospital, Tyler

DATE:
3rd Thursday of each month

DURATION:
Intermittent: 1 day per month

FEE:
None

TEACHING METHODS:
Lecture

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Linden Rounds

SPONSORS:
Linden Municipal Hospital; UT Southwestern Medical School at Dallas

LOCATION OF COURSE:
Linden Municipal Hospital, Linden, Tex

DATE:
4th Thursday of each month

DURATION:
Intermittent: 1 day per month

FEE:
None

TEACHING METHODS:
Lecture

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Family Practice Review—1974

SPONSORS:
UT Medical Branch at Galveston

LOCATION OF COURSE:
Galvez Hotel, Galveston

DATE:
February 3-9, 1974

DURATION:
Continuous: 5½ days; 44 total course hours

FEE:
$110

CREDIT:
44 hours AAFP

ENROLLMENT:
Maximum 110

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel, seminar

CONTACT:
Dr. S. R. Lewis, Director, Postgraduate Division, UT Medical Branch, Galveston 77550

TITLE:
Recent Advances in Anesthesiology

SPONSORS:
Texas Society of Anesthesiologists; Dept. of Anesthesiology, UT Southwestern Medical School at Dallas

LOCATION OF COURSE:
Parkland Memorial Hospital, Dallas

DATE:
February 18-22, 1974

DURATION:
Continuous: 5 days; 9 hours instruction per day, 45 total course hours

FEE:
$75

CREDIT:
AAFP

ENROLLMENT:
Minimum 10, maximum 25

DESIGNED FOR:
Family physicians who provide anesthesia services

TEACHING METHODS:
Audiovisual materials, bedside rounds, clinical conference, enrollee observes procedure, enrollee performs procedure, laboratory work, lecture, live clinic, open question, operative human surgery, panel, patient demonstration, seminar

CONTACT:
Dr. James W. Burleson, Director of Anesthesiology Educational Programs, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Current Trends in Radiology

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
March 16, 1974

DURATION:
Continuous: 1 day; 7 total course hours

FEE:
$40

CREDIT:
7 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 20, maximum 50

TEACHING METHODS:
Audiovisual materials, open question, patient demonstration, programmed instruction, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Workshop in Sexual Counseling

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
May 4, 1974

DURATION:
Continuous: 1 day; 6 total course hours

FEE:
$20

CREDIT:
6 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 30, maximum 75

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Diagnosis Using Laboratory Methods

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
May 18-19, 1974

DURATION:
Continuous: 2 days; 10 total course hours

FEE:
$65

CREDIT:
10 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 20

DESIGNED FOR:
Family physicians with part-time specialty

TEACHING METHODS:
Audiovisual materials, lecture, programmed instruction, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Medical and Dental Hypnosis—A Beginner's Guide

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
May 25, 1974

DURATION:
Continuous: 1 day; 6 total course hours

FEE:
$40

CREDIT:
6 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 20, maximum 40

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, enrollee performs procedure, open question, seminar, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Renology—Current Trends in Diagnosis and Therapy

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
La Posada Motor Hotel, Laredo

DATE:
May 25-26, 1974

DURATION:
Continuous: 2 days; 10 total course hours

FEE:
$65

CREDIT:
10 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 25, maximum 50

TEACHING METHODS:
Audiovisual materials, lecture, patient demonstration, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Clinical Hematology

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
June 1-2, 1974

DURATION:
Continuous: 2 days; 8 total course hours

FEE:
$65

CREDIT:
8 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 15, maximum 40

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, enrollee performs procedure, laboratory work, lecture, open question, panel, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Obesity—Successful Management

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
June 15, 1974

DURATION:
Continuous: 1 day; 7 total course hours

FEE:
$40

CREDIT:
7 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 20, maximum 40

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel, patient demonstration, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Hearing and Not Hearing—A Short Course

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
June 8, 1974

DURATION:
Continuous: 1 day; 7 total course hours

FEE:
$40

CREDIT:
7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 15, maximum 35

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, patient demonstration, programmed instruction

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Deciding on Neurosurgery

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
September 20-21, 1974

DURATION:
Continuous: 2 days; 10 total course hours

FEE:
$65

CREDIT:
10 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 10

TEACHING METHODS:
Audiovisual materials, lecture, panel, patient demonstration, seminar, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Ophthalmology and Otolaryngology for Primary Care Physicians

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
October 18-19, 1974

DURATION:
Continuous: 2 days; 6 hours instruction per day; 12 total course hours

FEE:
$85

CREDIT:
12 prescribed hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Maximum 100

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, open question, panel, seminar

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Pre-op and Post-op Management of the Surgical Patient

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
To be arranged

DATE:
To be arranged

DURATION:
Continuous: 2 days; 9 total course hours

FEE:
$75

CREDIT:
9 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 25

TEACHING METHODS:
Audiovisual materials, clinical conference, open question, panel, seminar

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Preceptorship in Gastroenterology

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
To be arranged

DURATION:
To be arranged

FEE:
To be negotiated

TEACHING METHODS:
Audiovisual materials, bedside rounds, enrollee observes procedure, enrollee performs procedure, open question, panel, seminar, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
The Role of Basic Science in Therapeutic Decisions (See BASIC SCIENCES)

TITLE:
Texas Academy of Family Physicians, Permian Basin Chapter, Spring Seminar
(See CARDIOVASCULAR DISEASE)

TITLE:
Hypertension, 1974—New Horizons
(See INTERNAL MEDICINE)

TITLE:
Rheumatology for the Family Physician
(See INTERNAL MEDICINE)

TITLE:
Spring Clinical Conference
(See OPHTHALMOLOGY)

TITLE:
Rehabilitation of Stroke Patients (See PHYSICAL MEDICINE AND REHABILITATION)

TITLE:
Differential Diagnosis and Management of Muscular Weakness (See PHYSICAL MEDICINE AND REHABILITATION)

TITLE:
Folk Medicine in Mexico and Southwestern United States (See PSYCHIATRY)

TITLE:
Evaluation of Trauma Patients (See SURGERY)

GENETICS

TITLE:
Practical Genetics for the Family Physician (See GENERAL MEDICINE)

HEALTH SERVICES: COLLEGE

TITLE:
52nd Annual Meeting of the American College Health Association

SPONSORS:
American College Health Association

LOCATION OF COURSE:
Hotel Adolphus, Dallas

DATE:
April 2-5, 1974

DURATION:
Continuous: 4 days

FEE:
$30 ACHA members; $40 nonmembers

CREDIT:
AAFP; Category I, AMA Physician's Recognition Award

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, open question, panel, seminar

CONTACT:
James W. Dilley, Executive Director, American College Health Association, 2807 Central St., Evanston, Ill. 60201

HEMATOLOGY

TITLE:
Course on Hematology

SPONSORS:
UT Health Science Center at Houston

LOCATION OF COURSE:
UT Health Science Center at Houston

DATE:
February 21-22, 1974

DURATION:
Continuous: 2 days

FEE:
Not determined

CREDIT:
AAFP

TEACHING METHODS:
Lecture

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

INTERNAL MEDICINE

TITLE:
Rheumatology for the Family Physician

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
January 10-February 28, 1974
(Each Thursday, 1-3 p.m.)

DURATION:
Intermittent: 8 days; 8 weeks; 2 hours instruction per day; 16 total course hours

FEE:
$100

CREDIT:
16 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 10, maximum 20

TEACHING METHODS:
Audiovisual materials, bedside rounds, open question, patient demonstration, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Medical Intensive Care Course #1

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
January 10-March 14, 1974 (Each Thursday)

DURATION:
Intermittent: 10 days; 10 weeks; 9 hours instruction per day; 90 total course hours

FEE:
$150

CREDIT:
90 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 4, maximum 4

TEACHING METHODS:
Audiovisual materials, bedside rounds, clinical conference, enrollee observes procedure, enrollee performs procedure, open question, patient demonstration, programmed instruction, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
The Physiological Basis of Clinical Disease

SPONSORS:
American College of Physicians; UT Southwestern Medical School at Dallas

LOCATION OF COURSE:
Marriott Motor Hotel, Dallas

DATE:
March 4-7, 1974

DURATION:
Continuous: 4 days; 24 total course hours

FEE:
ACP members $120; nonmembers $175; associates $60

CREDIT:
24 hours, Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 100, maximum 300

TEACHING METHODS:
Audiovisual materials, open question, panel

CONTACT:
M. H. Jackson, Registrar, American College of Physicians, 4200 Pine St., Philadelphia 19104

TITLE:
Hypertension, 1974—New Horizons

SPONSORS:
UT Health Science Center at San Antonio; Bexar County Medical Society

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
March 8-9, 1974

DURATION:
Continuous: 2 days; 10 total course hours

FEE:
$40

CREDIT:
10 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 20

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, panel, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Winans Visiting Professorship

SPONSORS:
A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
Beasley Auditorium, Baylor Medical Center, Dallas

DATE:
April 14-19, 1974

DURATION:
Continuous: 5 days

FEE:
None

DESIGNED FOR:
Internists

TEACHING METHODS:
Bedside rounds, clinical conference, lecture

CONTACT:
Dr. George J. Race, Dean of Roberts Center, 3500 Gaston Ave., Dallas 75246

TITLE:
Nuclear Medicine—Its Use in Defining Disease

SPONSORS:
UT Health Science Center at Houston; M. D. Anderson Hospital and Tumor Institute, Houston

LOCATION OF COURSE:
M. D. Anderson Hospital and Tumor Institute, Houston

DATE:
April 30-May 30, 1974

DURATION:
Intermittent: 10 days; 4 weeks; 2 hours instruction per day; 20 total course hours

FEE:
Not determined

TEACHING METHODS:
Clinical conference, enrollee observes procedure, enrollee performs procedure, lecture, live clinic, open question

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
Advanced EKG Course

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
September 13-14, 1974

DURATION:
Continuous: 2 days; 10 total course hours

FEE:
$75

CREDIT:
10 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 20, maximum 60

DESIGNED FOR:
Internists

TEACHING METHODS:
Audiovisual materials, clinical conference, enrollee observes procedure, enrollee performs procedure, seminar, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Medical Intensive Care Course #2

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
October 10-December 13, 1974 (Each Thursday)

DURATION:
Intermittent: 10 days; 10 weeks; 9 hours instruction per day; 90 total course hours

FEE:
$150

CREDIT:
90 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 4, maximum 4

TEACHING METHODS:
Audiovisual materials, bedside rounds, clinical conference, enrollee observes procedure, enrollee performs procedure, open question, patient demonstration, programmed instruction, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Annual Conference in Medicine and Surgery

SPONSORS:
Scott and White Memorial Hospital, Temple

LOCATION OF COURSE:
Scott and White Memorial Hospital, Temple

DATE:
October, 1974

DURATION:
Continuous: 1 day; 8 total course hours

FEE:
$35

CREDIT:
Category I, AMA Physician's Recognition Award

ENROLLMENT:
Maximum 150

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, panel

CONTACT:
Dr. Paxton H. Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

TITLE:
Annual Meeting

SPONSORS:
Texas Society of Internal Medicine; Texas Academy of Internal Medicine; American College of Physicians

LOCATION OF COURSE:
Not determined

DATE:
December, 1974

DURATION:
Continuous: 3 days

FEE:
Not determined

DESIGNED FOR:
Internists

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel, seminar

CONTACT:
Mrs. Iris Wenzel, Texas Medical Association, 1801 N. Lamar Blvd., Austin 78701

TITLE:
Internal Medicine Preceptorship

SPONSORS:
UT Southwestern Medical School at Dallas; A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
UT Southwestern Medical School at Dallas

DATE:
To be arranged

DURATION:
To be arranged

FEE:
To be negotiated

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Preceptorship in Pulmonary Medicine

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
To be arranged

DURATION:
To be arranged

FEE:
To be negotiated

TEACHING METHODS:
Bedside rounds, clinical conference, enrollee observes procedure, enrollee performs procedure, laboratory work, live clinic

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Special Training Course in Nuclear Medicine

SPONSORS:
UT Health Science Center at Houston; M. D. Anderson Hospital and Tumor Institute, Houston

LOCATION OF COURSE:
M. D. Anderson Hospital and Tumor Institute, Houston

DATE:
To be arranged

DURATION:
To be arranged

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
Sir William Osler Society Program

SPONSORS:
Medical & Surgical Clinic, Wichita Falls; UT Southwestern Medical School at Dallas; A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
Medical & Surgical Clinic, Wichita Falls

DATE:
Not determined

DURATION:
Intermittent: 1 day per month

FEE:
None

DESIGNED FOR:
Family Physicians with part-time specialty

TEACHING METHODS:
Lecture

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Preceptorship in Gastroenterology (See GENERAL MEDICINE)

TITLE:
Clinical Hematology (See GENERAL MEDICINE)

TITLE:
Renology—Current Trends in Diagnosis and Therapy (See GENERAL MEDICINE)

TITLE:
Pulmonary Pathology—Radiology Conference (See PATHOLOGY)

TITLE:
Preceptorship in Radiology (See RADIOLOGY)

MALIGNANT DISEASE

TITLE:
Eighth Annual Clinical Cancer Conference

SPONSORS:
UT Southwestern Medical School at Dallas

LOCATION OF COURSE:
UT Southwestern Medical School at Dallas

DATE:
March, 1974

DURATION:
Continuous: 1 day; 8 total course hours

FEE:
$10

TEACHING METHODS:
Clinical conference, lecture, panel

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Oncology Program

SPONSORS:
UT Health Science Center at Houston; M. D. Anderson Hospital and Tumor Institute, Houston

LOCATION OF COURSE:
Not determined

DATE:
Summer, 1974

DURATION:
Continuous

FEE:
Not determined

TEACHING METHODS:
Lecture

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
American Cancer Society's National Conference on Childhood Cancer (See PEDIATRICS)

METABOLISM

TITLE:
Nutrition

SPONSORS:
A. Webb Roberts Center, Dallas; Dallas Nutrition Council

LOCATION OF COURSE:
Beasley Auditorium, Baylor Medical Center, Dallas

DATE:
May 16-18, 1974

DURATION:
Intermittent: 2 days; 4 total course hours

FEE:
$10

TEACHING METHODS:
Lecture, open question, panel

CONTACT:
Dr. George J. Race, Dean, A. Webb Roberts Center, 3500 Gaston Ave., Dallas 75246

MEDICAL WRITING

TITLE:
Writing for Scientific Journals

SPONSORS:
American Medical Writers Association; A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
Beasley Auditorium, Baylor Medical Center, Dallas

DATE:
April 20, 1974

DURATION:
Continuous: 1 day; 8 total course hours

FEE:
$25

CREDIT:
None

ENROLLMENT:
Minimum 12

TEACHING METHODS:
Enrollee observes procedure, enrollee performs procedure, lecture, open question

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Medical and Technical Writing

SPONSORS:
UT Health Science Center at Houston; M. D. Anderson Hospital and Tumor Institute, Houston

LOCATION OF COURSE:
M. D. Anderson Hospital and Tumor Institute, Houston

DATE:
June, 1974

FEE:
Not determined

TEACHING METHODS:
Lecture

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

NEUROLOGY

TITLE:
Stroke Conference

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Methodist Hospital, Houston; Ben Taub Hospital, Houston

DATE:
January-December, 1974

DURATION:
Intermittent: 52 days; 52 weeks

FEE:
None

ENROLLMENT:
Minimum 1, maximum 10

TEACHING METHODS:
Clinical conference

CONTACT:
Dr. John Stirling Meyer, Professor and Chairman, Dept. of Neurology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Brain Cutting—Neuropathology

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Ben Taub Hospital, Houston

DATE:
January-December, 1974

DURATION:
Intermittent: 52 days; 52 weeks

FEE:
None

ENROLLMENT:
Minimum 1, maximum 10

TEACHING METHODS:
Clinical conference

CONTACT:
Dr. John Stirling Meyer, Professor and Chairman, Dept. of Neurology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Grand Rounds in Neurology

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Ben Taub Hospital, Veterans Administration Hospital; Methodist Hospital, Houston

DATE:
January-December, 1974

DURATION:
Intermittent: 52 days; 52 weeks

FEE:
None

ENROLLMENT:
Minimum 1, maximum 10

TEACHING METHODS:
Clinical conference

CONTACT:
Dr. John Stirling Meyer, Professor and Chairman, Dept. of Neurology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Neurological Sensory Disorders of the Elderly

SPONSORS:
UT Health Science Center at Houston

LOCATION OF COURSE:
UT Health Science Center at Houston

DATE:
March 7-9, 1974

DURATION:
Continuous: 3 days

FEE:
Not determined

CREDIT:
AAFP

ENROLLMENT:
Unlimited

TEACHING METHODS:
Audiovisual materials, lecture

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
Clinical Neurology for the Generalist

SPONSORS:
UT Health Science Center at Houston

LOCATION OF COURSE:
UT Health Science Center at Houston

DATE:
March 12-April 16, 1974

DURATION:
Intermittent: 6 days; 6 weeks

FEE:
Not determined

CREDIT:
AAFP

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
Neuropathology and Neurology for Psychiatrists

SPONSORS:
UT Southwestern Medical School at Dallas; A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
UT Southwestern Medical School at Dallas

DATE:
Spring, 1974

DURATION:
Intermittent: 2 days; 2 weeks; 10 total course hours

FEE:
None

CREDIT:
None

DESIGNED FOR:
Psychiatrists

TEACHING METHODS:
Lecture, open question

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Neurosurgery Visiting Professorship

SPONSORS:
A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
A. Webb Roberts Center, Dallas

DATE:
Spring, 1974

DURATION:
Continuous: 2 days

FEE:
None

CREDIT:
None

DESIGNED FOR:
Neurosurgeons

CONTACT:
Dr. George J. Race, Dean, A. Webb Roberts Center, 3500 Gaston Ave., Dallas 75246

TITLE:
Neurology Preceptorship

SPONSORS:
UT Southwestern Medical School at Dallas; A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
UT Southwestern Medical School at Dallas

DATE:
To be arranged

DURATION:
To be arranged

FEE:
To be negotiated

CREDIT:
None

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

NEUROSURGERY

TITLE:
Neurosurgery Teaching Conference

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
Not determined

FEE:
None

DESIGNED FOR:
Neurosurgeons

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, open question

CONTACT:
Dr. George Ehni, Head, Neurological Surgery, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Clinical Neurosurgery Conference

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Veterans Administration Hospital, Houston

DATE:
Not determined

FEE:
None

DESIGNED FOR:
Neurosurgeons

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, open question

CONTACT:
Dr. George A. Ehni, Head, Neurological Surgery, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Deciding on Neurosurgery (See GENERAL MEDICINE)

OBSTETRICS & GYNECOLOGY

TITLE:
Mike Hogg Intensive Review in Obstetrics and Gynecology

SPONSORS:
UT Health Science Center, Houston

LOCATION OF COURSE:
St. Joseph Hospital, Houston

DATE:
January 24-26, 1974

DURATION:
Continuous: 3 days

FEE:
Not determined

ENROLLMENT:
Unlimited

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
Current Obstetric and Gynecologic Practice

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE
UT Medical School at San Antonio

DATE:
January 24-30, 1974

DURATION:
Continuous: 5 days; 8 hours instruction per day; 40 total course hours

FEE:
$250

CREDIT:
40 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 50, maximum 150

TEACHING METHODS:
Audiovisual materials, bedside rounds, clinical conference, enrollee observes procedure, laboratory work, lecture, open question, panel, patient demonstration, seminar, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Perinatal Medicine Symposium

SPONSORS:
UT Health Science Center at Houston

LOCATION OF COURSE:
Hermann Hospital Auditorium, Houston

DATE:
February 7, 1974

DURATION:
Continuous: 1 day

FEE:
$20

CREDIT:
7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award

TEACHING METHODS:
Lecture, open question

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
Office Gynecology

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
April 27-28, 1974

DURATION:
Continuous: 2 days; 10 total course hours

FEE:
$65

CREDIT:
10 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 30

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Prostaglandins

SPONSORS:
UT Health Science Center at Houston; Baylor College of Medicine, Houston

LOCATION OF COURSE:
Not determined

DATE:
September, 1974

DURATION:
Continuous: 1 day

FEE:
Not determined

ENROLLMENT:
Unlimited

TEACHING METHODS:
Lecture

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
Bunkley Seminar in Obstetrics and Gynecology

SPONSORS:
Scott and White Memorial Hospital, Temple

LOCATION OF COURSE:
Scott and White Memorial Hospital, Temple

DATE:
November, 1974

DURATION:
Continuous: 1½ days; 10 total course hours

FEE:
$35

CREDIT:
Category I, AMA Physician's Recognition Award

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture

CONTACT:
Dr. Paxton H. Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

TITLE:
Diseases of the Vulva and Vagina

SPONSORS:
UT Health Science Center at Houston

LOCATION OF COURSE:
Not determined

DATE:
November 6-8, 1974

DURATION:
Continuous: 3 days

FEE:
Not determined

ENROLLMENT:
Unlimited

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
Ob-Gyn Preceptorship

SPONSORS:
UT Southwestern Medical School at Dallas; A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
UT Southwestern Medical School at Dallas

DATE:
To be arranged

DURATION:
To be arranged

FEE:
To be negotiated

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Preceptorship in Obstetrics and Gynecology

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
To be arranged

DURATION:
To be arranged

FEE:
To be negotiated

TEACHING METHODS:
Bedside rounds, clinical conference, enrollee observes procedure, enrollee performs procedure, live clinic, patient demonstration

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Spring Clinical Conference (See OPHTHALMOLOGY)

OPHTHALMOLOGY

TITLE:
Weekly Conference—Ophthalmology Department

SPONSORS:
UT Medical School at San Antonio

LOCATION OF COURSE:
Bexar County Hospital, San Antonio

DATE:
Every Friday

DURATION:
Intermittent: 52 days; 52 weeks; 1½ hours instruction per day

FEE:
None

CREDIT:
None

TEACHING METHODS:
Lecture, patient demonstration

CONTACT:
Dr. George Weinstein, Professor and Chairman, Dept. of Ophthalmology, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Basic Science Course in Ophthalmology

SPONSORS:
UT Health Science Center at Houston, Medical School Program in Ophthalmology

LOCATION OF COURSE:
UT Medical School at Houston

DATE:
January 7-March 1, 1974

DURATION:
Continuous: 40 days; 8 weeks; 6 hours instruction per day; 240 total course hours

FEE:
$600

ENROLLMENT:
Maximum 40

TEACHING METHODS:
Audiovisual materials, lecture, laboratory, open question

CONTACT:
Dr. Richard S. Ruiz, Director of the Program in Ophthalmology, UT Medical School at Houston, 1121 Hermann Professional Bldg., Houston 77025

TITLE:
Bi-Monthly Clinical Conference in Ophthalmology

SPONSORS:
UT Health Science Center at Dallas

LOCATION OF COURSE:
Parkland Memorial Hospital, Dallas

DATE:
January 16, February 20, May 15, June 19, October 16, November 20, 1974

DURATION:
Intermittent: 6 days; 8 hours instruction per day; 48 total course hours

FEE:
None

CREDIT:
None

ENROLLMENT:
Unlimited

TEACHING METHODS:
Clinical conference, lecture, open question, patient demonstration

CONTACT:
Dr. John Lynn, Chairman, Dept. of Ophthalmology, or Dr. George J. Race, Associate Dean for Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Plastic Surgery of the Orbital Region

SPONSORS:
Educational Foundation of the American Society of Plastic and Reconstructive Surgeons

LOCATION OF COURSE:
Fairmont Hotel, Dallas

DATE:
March 18-20, 1974

DURATION:
Continuous: 3 days

FEE:
None

DESIGNED FOR:
Plastic surgeons

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel, seminar

CONTACT:
Carl J. Olson, Ed.D., Coordinator of Education, American Society of Plastic & Reconstructive Surgeons, 29 E. Madison, Suite 807, Chicago 60602

TITLE:
Spring Clinical Conference

SPONSORS:
Dallas Southern Clinical Society

LOCATION OF COURSE:
Statler Hilton Hotel, Dallas

DATE:
March 18-20, 1974

DURATION:
Continuous: 3 days; 25 total course hours

FEE:
$40

CREDIT:
25 elective hours AAFP

ENROLLMENT:
Unlimited

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Robert L. Heath, Associate Executive Officer, Dallas Southern Clinical Society, Medical Arts Bldg., Dallas 75201

TITLE:
Eighth Annual Postgraduate Alumni Meeting

SPONSORS:
UT Medical Branch at Galveston

LOCATION OF COURSE:
Shriners Burns Institute, UT Medical Branch, Galveston

DATE:
March 30, 1974

DURATION:
Continuous: 1 day; 8 total course hours

FEE:
$25

ENROLLMENT:
Unlimited

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Dr. John Brennan, Senior Resident, Dept. of Ophthalmology, UT Medical Branch, Galveston 77550

TITLE:
Retinal Symposium

SPONSORS:
UT Medical School at Houston

LOCATION OF COURSE:
Hermann Hospital, Houston

DATE:
April 13, 1974

DURATION:
Continuous: 1 day; 8 total course hours

FEE:
None

ENROLLMENT:
Unlimited

DESIGNED FOR:
Ophthalmologists

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Dr. Charles Russo, 1121 Hermann Professional Bldg., Houston 77025

TITLE:
Baylor College of Medicine, Department of Ophthalmology Alumni Conference

SPONSORS:
Baylor College of Medicine, Department of Ophthalmology, Houston

LOCATION OF COURSE:
Not determined

DATE:
April 5-6, 1974

DURATION:
Continuous: 2 days

FEE:
$25

CREDIT:
None

DESIGNED FOR:
Ophthalmologists

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel, television

CONTACT:
Robert E. Anderson, Ph.D., Assistant Professor, Dept. of Ophthalmology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Semi-annual Clinical Conference

SPONSORS:
UT Medical School at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
May and November, 1974

DURATION:
Continuous: 1 day; 8 total course hours

FEE:
None

ENROLLMENT:
Unlimited

DESIGNED FOR:
Ophthalmologists

TEACHING METHODS:
Audiovisual materials, lecture, open question, patient demonstration

CONTACT:
Dr. George Weinstein, Professor and Chairman, Dept. of Ophthalmology, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Ultrasonography in Ophthalmology

SPONSORS:
UT Medical School at Houston

LOCATION OF COURSE:
Hermann Hospital, Houston

DATE:
June, 1974

DURATION:
Continuous: 1 day; 5 total course hours

FEE:
None

CREDIT:
None

DESIGNED FOR:
Ophthalmologists

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Dr. Charles Garcia, 6436 Fannin, Suite 403, Houston 77025

TITLE:
Ophthalmology Grand Rounds

SPONSORS:
Baylor College of Medicine, Department of Ophthalmology, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
July 1, 1974-June 30, 1975

DURATION:
Intermittent: 52 days; 52 weeks; each Friday, 8-10 a.m.

FEE:
None

DESIGNED FOR:
Ophthalmologists

TEACHING METHODS:
Audiovisual materials, clinical conference, open question, patient demonstration, television

CONTACT:
Dr. David Paton, Professor and Chairman, Dept. of Ophthalmology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Conference in Fluorescein Angiography

SPONSORS:
Baylor College of Medicine, Department of Ophthalmology, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
July 1, 1974-June 30, 1975

DURATION:
Intermittent: 26 weeks; 1st and 3rd Thursday; 2 hours instruction per day

FEE:
None

DESIGNED FOR:
Ophthalmologists

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, open question, panel

CONTACT:
Dr. Raul Valenzuela, Assistant Professor of Ophthalmology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Clinical Pathological Conference in Ophthalmology

SPONSORS:
Baylor College of Medicine, Department of Ophthalmology, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
July 1, 1974-June 30, 1975

DURATION:
Intermittent: 52 weeks; each Tuesday at 5 p.m.

FEE:
None

DESIGNED FOR:
Ophthalmologists

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, open question, panel, seminar

CONTACT:
Dr. Milton Boniuk, Professor of Ophthalmology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Ophthalmology for Family Physicians

SPONSORS:
Texas Society for the Prevention of Blindness; UT Health Science Center at Houston, Medical School Program in Ophthalmology

LOCATION OF COURSE:
North and South Auditorium, Hermann Hospital, Houston

DATE:
July 20, 1974

DURATION:
Continuous: 1 day; 6 total course hours

FEE:
$10

CREDIT:
6 prescribed hours AAFP

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Joanne Allen, Program Director, Texas Society for the Prevention of Blindness, 3617 Fannin, Houston 77004

TITLE:
Ophthalmology Basic and Clinical Science Course; Integrated Lecture Series

SPONSORS:
Baylor College of Medicine, Department of Ophthalmology, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
September 1, 1974-June 30, 1975

DURATION:
Intermittent: Each Saturday

FEE:
None

DESIGNED FOR:
Ophthalmologists

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, open question, panel, television

CONTACT:
Dr. Dan B. Jones, Associate Professor of Ophthalmology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Pediatric Ophthalmology Symposium

SPONSORS:
UT Medical School at Houston

LOCATION OF COURSE:
Hermann Hospital, Houston

DATE:
November 9, 1974

DURATION:
Continuous: 1 day; 8 total course hours

FEE:
None

CREDIT:
8 hours AAFP; Category I, AMA Physician's Recognition Award

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Dr. Malcolm Mazow, 1121 Hermann Professional Bldg., Houston 77025

TITLE:
Hermann Hospital Annual Ophthalmology Alumni Meeting

SPONSORS:
UT Medical School at Houston, Program in Ophthalmology; Hermann Hospital, Houston

LOCATION OF COURSE:
Hermann Hospital, Houston

DATE:
December, 1974

DURATION:
Continuous: 1 day; 6 total course hours

FEE:
None

TEACHING METHODS:
Lecture

CONTACT:
Dr. Richard S. Ruiz, Director of the Program in Ophthalmology, UT Medical School at Houston, 1121 Hermann Professional Bldg., Houston 77025

TITLE:
Ophthalmology Preceptorship

SPONSORS:
UT Southwestern Medical School at Dallas; A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
UT Southwestern Medical School at Dallas

DATE:
By arrangement

DURATION:
By arrangement

FEE:
To be negotiated

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Ophthalmology and Otolaryngology for Primary Care Physicians (See GENERAL MEDICINE)

ORTHOPEDIC SURGERY

TITLE:
Adult Salvage Orthopaedics

SPONSORS:
American Academy of Orthopaedic Surgeons

LOCATION OF COURSE:
Ponderosa Motor Inn, Temple

DATE:
March 25-27, 1974

DURATION:
Continuous: 3 days; 8 hours instruction per day; 24 total course hours

FEE:
$150 physicians; $50 residents (with letter from chief)

ENROLLMENT:
Maximum 250

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel

CONTACT:
Department of Continuing Education, American Academy of Orthopaedic Surgeons, 430 N. Michigan Ave., Chicago 60611

TITLE:
Juvenile Arthritis and Other Arthropathies in Children

SPONSORS:
American Academy of Orthopaedic Surgeons

LOCATION OF COURSE:
Marriott Motor Hotel, Houston

DATE:
May 23-25, 1974

DURATION:
Continuous: 3 days; 8 hours instruction per day; 24 total course hours

FEE:
$150 physicians; $50 residents (with letter from chief)

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel

CONTACT:
Department of Continuing Education, American Academy of Orthopaedic Surgeons, 430 N. Michigan Ave., Chicago 60611

TITLE:
Upper Extremity Trauma

SPONSORS:
American Academy of Orthopaedic Surgeons

LOCATION OF COURSE:
San Antonio Convention Center

DATE:
November 20-22, 1974

DURATION:
Continuous: 3 days; 8 hours instruction per day; 24 total course hours

FEE:
$150 physicians; $50 residents (with letter from chief)

ENROLLMENT:
Maximum 400

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel

CONTACT:
Department of Continuing Education, American Academy of Orthopaedic Surgeons, 430 N. Michigan Ave., Chicago 60611

TITLE:
Moore Lectureship in Orthopedic Surgery

SPONSORS:
A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
Beasley Auditorium, Baylor Medical Center, Dallas

DATE:
Not determined

DURATION:
Continuous: 2 days

FEE:
None

DESIGNED FOR:
Orthopedic surgeons

TEACHING METHODS:
Bedside rounds, clinical conference, lecture

CONTACT:
Dr. George J. Race, Dean, A. Webb Roberts Center, 3500 Gaston Ave., Dallas 75246

OTOLARYNGOLOGY

TITLE:
Otolaryngology and Head and Neck Surgery

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
May 16-18, 1974

DURATION:
Continuous: 3 days

FEE:
Not determined

CREDIT:
None

ENROLLMENT:
Unlimited

DESIGNED FOR:
Otolaryngologists and head and neck surgeons

TEACHING METHODS:
Audiovisual materials, bedside rounds, clinical conference, lecture, open question, panel, seminar

CONTACT:
Dr. B. R. Alford, Professor and Chairman, Dept. of Otorhinolaryngology and Communicative Sciences, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Management of Carcinoma of the Larynx

SPONSORS:
UT Medical Branch at Galveston

LOCATION OF COURSE:
Houston Oaks Hotel, Houston

DATE:
May 24-25, 1974

DURATION:
Continuous: 2 days

FEE:
$50

ENROLLMENT:
Minimum 40

DESIGNED FOR:
Otolaryngologists

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel

CONTACT:
Dr. Byron J. Bailey, Professor and Chairman, Dept. of Otolaryngology, UT Medical Branch, Galveston 77550

TITLE:
Ophthalmology and Otolaryngology for Primary Care Physicians (See GENERAL MEDICINE)

PATHOLOGY

TITLE:
Pulmonary Pathology—Radiology Conference

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
First Thursday of each month, January-May, 1974; September-December, 1974

DURATION:
Intermittent: 1 day per month; 1 hour instruction per day

FEE:
None

CREDIT:
None

ENROLLMENT:
Maximum 100

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, open question, panel

CONTACT:
Dr. S. Donald Greenberg, Associate Professor, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Pathology Seminar

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
Third Wednesday of each month; January-June, 1974; September-October, 1974

DURATION:
Intermittent: 12 total course hours

FEE:
None

ENROLLMENT:
Maximum 80

DESIGNED FOR:
Pathologists

TEACHING METHODS:
Lecture, open question, seminar

CONTACT:
Dr. Minoru Suzuki or Dr. S. Donald Greenberg, Dept. of Pathology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Current Problems in Liver Disease

SPONSORS:
Houston Society of Clinical Pathologists; Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
March 30, 1974

DURATION:
Continuous: 1 day

FEE:
$50

ENROLLMENT:
Maximum 300

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, open question, panel, seminar

CONTACT:
Dr. Jack L. Titus, Houston Society of Clinical Pathologists, 1200 Moursund Ave., Houston 77025

TITLE:
Diagnosis Using Laboratory Methods (See GENERAL MEDICINE)

PEDIATRICS

TITLE:
Weekly Pediatric Cardiology Conference

SPONSORS:
UT Southwestern Medical School at Dallas; Children's Medical Center, Dallas

LOCATION OF COURSE:
Moore Auditorium, Children's Medical Center, Dallas

DATE:
Each Wednesday

DURATION:
Intermittent: 52 days; 52 weeks

FEE:
None

DESIGNED FOR:
Pediatricians

TEACHING METHODS:
Lecture

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Annual Conference in Pediatrics

SPONSORS:
Scott and White Memorial Hospital, Temple

LOCATION OF COURSE:
Scott and White Memorial Hospital, Temple

DATE:
March, 1974

DURATION:
Continuous: 1 day; 6 total course hours

FEE:
$35

CREDIT:
Category I, AMA Physician's Recognition Award

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture

CONTACT:
Dr. Paxton H. Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

TITLE:
Pediatric Potpourri

SPONSORS:
UT Medical Branch at Galveston; Pediatric Alumni Foundation, Galveston

LOCATION OF COURSE:
UT Medical Branch at Galveston

DATE:
March 14-15, 1974

DURATION:
Continuous: 2 days

FEE:
$75

CREDIT:
12 prescribed hours, AAFP

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, open question, panel, programmed instruction, seminar

CONTACT:
Dr. Lillian H. Lockhart, Associate Professor, Dept. of Pediatrics, UT Medical Branch, Galveston 77550

TITLE:
Newborn Seminar

SPONSORS:
Baylor University Medical Center, Dallas

LOCATION OF COURSE:
A. Webb Roberts Center, Dallas

DATE:
May, 1974

DURATION:
Continuous: 1 day

FEE:
None

DESIGNED FOR:
Pediatricians

TEACHING METHODS:
Audiovisual materials, lecture, panel

CONTACT:
Dr. George J. Race, Dean, A. Webb Roberts Center, 3500 Gaston Ave., Dallas 75246

TITLE:
Postgraduate Pediatrics

SPONSORS:
UT Health Science Center at San Antonio; Santa Rosa Medical Center, San Antonio

LOCATION OF COURSE:
Santa Rosa Children's Hospital, San Antonio

DATE:
May 4-5, 1974

DURATION:
Continuous: 2 days; 8 total course hours

FEE:
None

CREDIT:
8 hours AAFP; Category I, AMA Physician's Recognition Award

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, panel

CONTACT:
Dr. Howard A. Britton, Dept. of Pediatrics, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
12th Annual Teaching Conference

SPONSORS:
UT Health Science Center at San Antonio; The Children's Hospital Foundation

LOCATION OF COURSE:
Santa Rosa Children's Hospital, San Antonio

DATE:
May 4-5, 1974

DURATION:
Continuous: 2 days; 8 total course hours

FEE:
$10

CREDIT:
AAFP

ENROLLMENT:
Maximum 200

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Dr. Howard A. Britton, Dept. of Pediatrics, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
American Cancer Society's National Conference on Childhood Cancer

SPONSORS:
American Cancer Society

LOCATION OF COURSE:
Dallas

DATE:
May 16-18, 1974

DURATION:
Continuous: 2½ days; 15 total course hours

FEE:
None

CREDIT:
15 elective hours AAFP; Category I, AMA Physician's Recognition Award

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel, seminar

CONTACT:
Dr. S. L. Arje, Vice President for Professional Education, American Cancer Society, 219 E. 42nd St., New York 10017

TITLE:
Eighth Annual Pediatrics Postgraduate Course

SPONSORS:
UT Southwestern Medical School at Dallas; A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
Children's Medical Center of Dallas

DATE:
June 7-8, 1974

DURATION:
Continuous: 2 days

FEE:
None

DESIGNED FOR:
Pediatricians

TEACHING METHODS:
Panel, patient demonstration, seminar

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Psychological Assessment of Children

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
August 3, 1974

DURATION:
Continuous: 1 day; 7 total course hours

FEE:
$40

CREDIT:
7 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 15, maximum 35

DESIGNED FOR:
Pediatricians

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, enrollee performs procedure, lecture, open question, patient demonstration, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Preceptorships in Newborn Care

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
To be arranged

DURATION:
To be arranged

FEE:
To be negotiated

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, enrollee performs procedure, open question, laboratory work, panel, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Pediatric Preceptorship

SPONSORS:
UT Southwestern Medical School at Dallas; A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
UT Southwestern Medical School at Dallas

DATE:
By arrangement

DURATION:
By arrangement

FEE:
To be negotiated

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Hearing and Not Hearing—A Short Course (See GENERAL MEDICINE)

PHYSICAL MEDICINE & REHABILITATION

TITLE:
Stroke: Complete Care

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
February 2, 1974

DURATION:
Continuous: 1 day; 7 total course hours

FEE:
$40

CREDIT:
7 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 10, maximum 30

TEACHING METHODS:
Audiovisual materials, bedside rounds, enrollee observes procedure, panel, seminar

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Review Course in Physical Medicine and Rehabilitation

SPONSORS:
Veterans Administration Hospital, Houston; Baylor College of Medicine, Houston

LOCATION OF COURSE:
Veterans Administration Hospital and Texas Medical Center, Houston

DATE:
Spring, 1974

DURATION:
Continuous: 10 days; 2 weeks; 8 hours instruction per day; 80 total course hours

FEE:
None

DESIGNED FOR:
Candidates for the American Board of Physical Medicine and Rehabilitation examination

TEACHING METHODS:
Audiovisual materials, lecture, seminar

CONTACT:
Dr. Lewis A. Leavitt, Chairman, Dept. of Physical Medicine, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
An Intensive Course in Neuromuscular Diseases

SPONSORS:
Veterans Administration Hospital, Houston; Baylor College of Medicine, Houston

LOCATION OF COURSE:
Shamrock Hilton Hotel, Houston

DATE:
Spring, 1974

DURATION:
Continuous: 3 days; 8 hours instruction per day; 24 total course hours

TEACHING METHODS:
Lecture, panel, seminar

CONTACT:
Dr. W. P. Blocker, Jr., Chief, Rehab. Med. Service, VA Hospital, 2002 Holcombe Blvd., Houston 77031

TITLE:
Differential Diagnosis and Management of Muscular Weakness

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
May 31, 1974

DURATION:
Continuous: 1 day; 7 total course hours

FEE:
$40

CREDIT:
7 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 15, maximum 40

TEACHING METHODS:
Audiovisual materials, bedside rounds, lecture, seminar, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Annual Browning Seminar in Physical Medicine

SPONSORS:
A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
Beasley Auditorium, Baylor Medical Center, Dallas

DATE:
September, 1974

DURATION:
Continuous: 1 day

FEE:
None

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Dr. George J. Race, Dean, A. Webb Roberts Center, 3500 Gaston Ave., Dallas 75246

TITLE:
Physical Medicine Preceptorship

UT Southwestern Medical School at Dallas; A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
UT Southwestern Medical School at Dallas

DATE:
By arrangement

DURATION:
By arrangement

FEE:
To be negotiated

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines, Blvd., Dallas 75235

TITLE:
Rheumatology for the Family Physician (See INTERNAL MEDICINE)

PSYCHIATRY

TITLE:
Psychiatry Grand Rounds

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
1st, 2nd, & 3rd Wednesdays of each month

DURATION:
Intermittent: 3 days per month; 1½ hours per day

FEE:
None

ENROLLMENT:
Maximum 80

TEACHING METHODS:
Audiovisual materials, bedside rounds, clinical conference, enrollee observes procedure, lecture, live clinic, open question, panel, patient demonstration, seminar, television

CONTACT:
Dr. William A. Cantrell, Dept. of Psychiatry, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Sleep and Dreams

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
January 14-15, 1974

DURATION:
Continuous: 2 days; 10 total course hours

FEE:
$65

CREDIT:
10 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 10

DESIGNED FOR:
Psychiatrists

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, open question, panel, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Psychiatry in Medical Practice II

SPONSORS:
UT Health Science Center at Houston

LOCATION OF COURSE:
UT Health Science Center at Houston

DATE:
January 24-April 25, 1974

DURATION:
Intermittent: 14 days; 14 weeks; 2 hours instruction per day; 28 total course hours

FEE:
Not determined

CREDIT:
AAFP

TEACHING METHODS:
Lecture, open question

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
Intensive Review of Psychiatry

SPONSORS:
UT Health Science Center at Houston

LOCATION OF COURSE:
UT Health Science Center at Houston

DATE:
March 13-April 17, 1974

DURATION:
Intermittent: 6 days; 6 weeks; 2 hours instruction per day; 12 total course hours

FEE:
Not determined

TEACHING METHODS:
Audiovisual materials, lecture, open question

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
Family Therapy

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Not determined

DATE:
April 6-7, 1974

DURATION:
Continuous: 2-3 days

FEE:
Not determined

ENROLLMENT:
Minimum 30, maximum 50

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, lecture, live clinic, open question, seminar

CONTACT:
Dr. David A. Freedman, Dept of Psychiatry, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Folk Medicine in Mexico and Southwestern United States

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
October 3, 1974

DURATION:
Continuous: 1 day; 7 total course hours

FEE:
$15

CREDIT:
7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award

TEACHING METHODS:
Audiovisual materials, lecture, open question, seminar

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Psychiatry Preceptorship

UT Southwestern Medical School at Dallas; A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
UT Southwestern Medical School at Dallas

DATE:
By arrangement

DURATION:
By arrangement

FEE:
To be negotiated

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Neuropsychiatric Seminars

SPONSORS:
Texas Department of Mental Health and Mental Retardation

LOCATION OF COURSE:
Not determined

DATE:
Not determined

DURATION:
Continuous: 1 day; 8 total course hours

FEE:
None

CREDIT:
6 hours AAFP

TEACHING METHODS:
Lecture, open question, panel, seminar

CONTACT:
Dr. Ira Tunnell, Deputy Commissioner for Mental Health Services, Texas Department of Mental Health and Mental Retardation, PO Box 12668, Austin 78711

PUBLIC HEALTH & PREVENTIVE MEDICINE

TITLE:
Multiphasic Health Screening: Principles and Practice

SPONSORS:
Xerox Center for Health Care Research, Houston; Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
January, April, July, October, 1974

DURATION:
Continuous: 1 day; 8 total course hours

FEE:
$200

ENROLLMENT:
Minimum 5

TEACHING METHODS:
Audiovisual materials, clinical conference, enrollee performs procedure, laboratory work, lecture, live clinic, patient demonstration

CONTACT:
Dr. Harry S. Lipscomb, Professor, Community Medicine, Baylor College of Medicine, Texas Medical Center, Houston 77025

RADIOLOGY

TITLE:
External Beam, Interstitial and Intracavitary Dosimetry—Principles

SPONSORS:
UT Health Science Center at Houston; M. D. Anderson Hospital and Tumor Institute, Houston

LOCATION OF COURSE:
M. D. Anderson Hospital and Tumor Institute, Houston

DATE:
January 2-12, July 1-12, 1974

DURATION:
Continuous: 10 days; 8 hours instruction per day; 80 total course hours

FEE:
$280

ENROLLMENT:
Minimum 10, maximum 25

TEACHING METHODS:
Enrollee observes procedure, enrollee performs procedure, lecture, open question

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
External Beam, Interstitial, and Intracavitary Dosimetry—Manual and Computer Methods of Calculation

SPONSORS:
M. D. Anderson Hospital and Tumor Institute, Houston

LOCATION OF COURSE:
M. D. Anderson Hospital and Tumor Institute, Houston

DATE:
January 14-25, 1974

DURATION:
Continuous: 2 weeks

FEE:
$280

DESIGNED FOR:
Radiologists

CONTACT:
Vincent Sampiere or Marilyn Stovall, M. D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston 77025

TITLE:
High Energy Electron, X-Ray and Neutron Dosimetry

SPONSORS:
M. D. Anderson Hospital and Tumor Institute, Houston

LOCATION OF COURSE:
M. D. Anderson Hospital and Tumor Institute, Houston

DATE:
January 28-February 2, 1974

DURATION:
Continuous: 5½ days

FEE:
$220

DESIGNED FOR:
Radiologists

TEACHING METHODS:
Laboratory work, lecture

CONTACT:
Dr. Peter R. Almond, Physicist, M. D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston 77025

TITLE:
External Beam, Interstitial, and Intracavitary Dosimetry—Principles

SPONSORS:
M. D. Anderson Hospital and Tumor Institute, Houston

LOCATION OF COURSE:
M. D. Anderson Hospital and Tumor Institute, Houston

DATE:
January 28-February 2, 1974

DURATION:
Continuous: 10 days; 8 hours instruction per day; 80 total course hours

FEE:
$280

TEACHING METHODS:
Laboratory work, lecture

CONTACT:
Dr. Robert J. Shalek, Head, Dept. of Physics, M. D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston 77025

TITLE:
Radiation Biology and Radiological Physics for Radiologists

SPONSORS:
UT Southwestern Medical School at Dallas; UT Health Science Center at Dallas

LOCATION OF COURSE:
Marriott Motor Hotel, Dallas

DATE:
May 31-June 2, 1974

DURATION:
Continuous: 3 days

FEE:
$50

DESIGNED FOR:
Radiologists

TEACHING METHODS:
Lecture, open question

CONTACT:
Mary Esther Gaulden, Ph.D., Associate Professor of Radiology, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Gilbert Lecture in Radiology

SPONSORS:
A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
Beasley Auditorium, Baylor Medical Center, Dallas

DATE:
October, 1974

DURATION:
Continuous: 2 days

TEACHING METHODS:
Lecture, open question, panel, seminar

CONTACT:
Dr. George J. Race, Dean, A. Webb Roberts Center, 3500 Gaston Ave., Dallas 75246

TITLE:
Radiology Preceptorship

SPONSORS:
UT Southwestern Medical School at Dallas; A. Webb Roberts Center, Dallas

LOCATION OF COURSE:
UT Southwestern Medical School at Dallas

DATE:
By arrangement

DURATION:
By arrangement

FEE:
To be negotiated

CONTACT:
Dr. George J. Race, Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Training Course in Mammography

SPONSORS:
UT Health Science Center at Houston

LOCATION OF COURSE:
St. Joseph Hospital, Houston

DATE:
To be arranged

DURATION:
Continuous: 3 days; 8 hours instruction per day; 24 total course hours

FEE:
None

ENROLLMENT:
Maximum 6

TEACHING METHODS:
Xeroradiographic technique

CONTACT:
Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

TITLE:
Preceptorship in Radiology

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
To be arranged

DURATION:
To be arranged

FEE:
To be negotiated

TEACHING METHODS:
Audiovisual materials, bedside rounds, enrollee observes procedure, enrollee performs procedure, laboratory work, patient demonstration, programmed instruction

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Current Trends in Radiology
(See GENERAL MEDICINE)

TITLE:
Pulmonary Pathology—Radiology Conference (See PATHOLOGY)

SURGERY

TITLE:
Evaluation of Trauma Patients

SPONSORS:
UT Health Science Center at San Antonio

LOCATION OF COURSE:
UT Medical School at San Antonio

DATE:
March 22-23, 1974

DURATION:
Continuous: 2 days; 12 total course hours

FEE:
$65

CREDIT:
12 hours AAFP; Category I, AMA Physician's Recognition Award

ENROLLMENT:
Minimum 20, maximum 100

DESIGNED FOR:
Surgeons

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, open question, panel, television

CONTACT:
Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr., San Antonio 78284

TITLE:
Annual Meeting

SPONSORS:
North Texas Chapter, American College of Surgeons

LOCATION OF COURSE:
Chaparral Club, Southland Center, Dallas

DATE:
May 18, 1974

DURATION:
Continuous: 1 day; 7 total course hours

FEE:
None

CREDIT:
None

DESIGNED FOR:
Surgeons

ENROLLMENT:
Unlimited

TEACHING METHODS:
Audiovisual materials, lecture, open question, panel

CONTACT:
Dr. Ronald C. Jones, Secretary-Treasurer, Texas Chapter, ACS, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
G. V. Brindley Lecture in Surgery

SPONSORS:
Scott and White Memorial Hospital, Temple

LOCATION OF COURSE:
Scott and White Memorial Hospital, Temple

DATE:
September, 1974

DURATION:
Continuous: 1 day; 1 hour instruction

FEE:
None

CREDIT:
Category I, AMA Physician's Recognition Award

TEACHING METHODS:
Lecture

CONTACT:
Dr. Paxton H. Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

TITLE:
Surgery

SPONSORS:
Baylor College of Medicine, Houston

LOCATION OF COURSE:
Baylor Affiliated Hospitals

DATE:
To be arranged

DURATION:
Continuous: 3-5 days

FEE:
None

CREDIT:
None

DESIGNED FOR:
Surgeons

ENROLLMENT:
Maximum 10

TEACHING METHODS:
Bedside rounds, clinical conference, enrollee observes procedure, open question, operative human surgery

CONTACT:
Dr. George Jordan, Professor of Surgery, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Spring Clinical Conference (See OPHTHALMOLOGY)

TITLE:
William Beaumont Gastrointestinal Symposium (See GASTROENTEROLOGY)

TITLE:
Pulmonary Pathology—Radiology Conference (See PATHOLOGY)

TITLE:
Pre-op and Post-op Management of the Surgical Patient (See GENERAL MEDICINE)

TITLE:
Deciding on Neurosurgery (See GENERAL MEDICINE)

TITLE:
Annual Conference in Medicine and Surgery (See INTERNAL MEDICINE)

TITLE:
Plastic Surgery of the Orbital Region (See OPHTHALMOLOGY)

TITLE:
Otolaryngology and Head and Neck Surgery (See OTOLARYNGOLOGY)

UROLOGY

TITLE:
Postgraduate Seminar in Urology

SPONSORS:
South Central Section of American Urological Association

LOCATION OF COURSE:
UT Health Science Center at Dallas

DATE:
October 25-27, 1974

DURATION:
Continuous: 3 days; 10 hours instruction per day; 30 total course hours

FEE:
Approx. $200

ENROLLMENT:
Maximum 500

TEACHING METHODS:
Audiovisual materials, clinical conference, lecture, open question, panel

CONTACT:
Dr. Paul C. Peters, Chairman, Urology Division, UT Health Science Center at Dallas, 5323 Harry Hines Blvd., Dallas 75235

TITLE:
Urologic Pathology

SPONSORS:
Baylor College of Medicine, Department of Pathology, Houston

LOCATION OF COURSE:
Baylor College of Medicine, Houston

DATE:
November 14, 1974-January 30, 1975

DURATION:
Intermittent: 11 days; 11 weeks; 3 hours instruction per day; 33 total course hours

FEE:
$300

DESIGNED FOR:
Urologists

TEACHING METHODS:
Audiovisual materials, enrollee observes procedure, enrollee performs procedure, laboratory work, lecture, open question, television

CONTACT:
Dr. Joyce S. Davis, Associate Professor of Pathology, Baylor College of Medicine, Texas Medical Center, Houston 77025

TITLE:
Urologic Management of Neurogenic Bladder, Incontinence, Impotence

SPONSORS:
UT Southwestern Medical School at Dallas

LOCATION OF COURSE:
Children's Medical Center, Dallas

DATE:
December 13-14, 1974

DURATION:
Continuous: 2 days; 6 hours instruction per day; 12 total course hours

FEE:
None

ENROLLMENT:
Maximum 200

TEACHING METHODS:
Clinical conference, lecture, live clinic, open question, panel, patient demonstration

CONTACT:
Dr. Paul C. Peters, Chairman, Urology Division, UT Health Science Center at Dallas, 5323 Harry Hines Blvd., Dallas 75235

CALENDAR INDEX OF COURSES

JANUARY

Basic Sciences
Biochemistry Seminar, Houston, January-June
Summer Workshop in Biophysics and Its Physiological Applications, Houston, First quarter
Vector Analysis of the Electrocardiogram, Houston, First quarter
Lectures on the History of Medicine, Houston, First quarter

General Medicine
Therapeutics Seminars, San Antonio, January 3-December 19
History and Philosophy of Medicine, Dallas, January 17-18
Practical Genetics for the Family Physician, Houston, January 26
Monthly Lectures, Waco, January-December, 3rd Wednesday
Monthly Meeting of East Texas Academy of Internal Medicine, Tyler, January-December, 3rd Thursday
Linden Rounds, Linden, January-December, 4th Thursday

Internal Medicine
Rheumatology for the Family Physician, San Antonio, January 10-February 28
Medical Intensive Care Course #1, San Antonio, January 10-March 14

Neurology
Stroke Conference, Houston, January-December
Brain Cutting—Neuropathology, Houston, January-December
Grand Rounds in Neurology, Houston, January-December

Obstetrics and Gynecology
Mike Hogg Intensive Review in Obstetrics and Gynecology, Houston, January 24-26
Current Obstetric and Gynecologic Practice, San Antonio, January 24-30

Ophthalmology
Weekly Conference—Ophthalmology Department, San Antonio, January-December
Basic Science Course in Ophthalmology, Houston, January 7-March 1
Bi-Monthly Clinical Conference in Ophthalmology, Dallas, January 16-November 20

Pathology
Pulmonary Pathology—Radiology Conference, Houston, January-May; September-December
Pathology Seminar, Houston, January-June; September-October

Pediatrics
Weekly Pediatric Cardiology Conference, Dallas, January-December

Psychiatry
Psychiatry Grand Rounds, Houston, January-December
Sleep and Dreams, San Antonio, January 14-15
Psychiatry in Medical Practice II, Houston, January 24-April 25

Public Health and Preventive Medicine
Multiphasic Health Screening: Principles and Practice, Houston, January, April, July, October

Radiology
External Beam, Interstitial and Intracavitary Dosimetry—Principles, Houston, January 2-12
External Beam, Interstitial, and Intracavitary Dosimetry—Manual and Computer Methods of Calculation, Houston, January 14-25
High Energy Electron, X-Ray and Neutron Dosimetry, Houston, January 28-February 2
External Beam, Interstitial, and Intracavitary Dosimetry—Principles, Houston, January 28-February 2

FEBRUARY

Anesthesiology
Practical Respiratory Therapy and Evaluation of Patients, Galveston, February 11-13

Basic Sciences
Review of Current Pharmacology, Dallas, February 6, 13, 20, 27
Symposium on the Application of Nutrition in the Health Sciences, Houston, February 8-9

Cardiovascular Disease
Cardiologic Perspectives for the Internist—1974, Houston, February 27-March 1

General Medicine
Family Practice Review—1974, Galveston, February 3-9
Recent Advances in Anesthesiology, Dallas, February 18-22

Hematology
Course on Hematology, Houston, February 21-22

Obstetrics and Gynecology
Perinatal Medicine Symposium, Houston, February 7

Physical Medicine and Rehabilitation
Stroke: Complete Care, San Antonio, February 1

MARCH

Cardiovascular Disease
Clinical Cardiology Course, Houston, March 20-December 4
Texas Academy of Family Physicians, Permian Basin Chapter, Spring Seminar, Fort Davis, March 29-30

Gastroenterology
William Beaumont Gastrointestinal Symposium, El Paso, March 13-15

General Medicine
Current Trends In Radiology, San Antonio, March 16
The Physiological Basis of Clinical Disease, Dallas, March 4-7
Hypertension, 1974—New Horizons, San Antonio, March 29-30

Malignant Disease
Eighth Annual Clinical Cancer Conference, Dallas, March

Neurology
Neurological Sensory Disorders of the Elderly, Houston, March 7-9
Clinical Neurology for the Generalist, Houston, March 12-April 16

Ophthalmology
Plastic Surgery of the Orbital Region, Dallas, March 18-20
Spring Clinical Conference, Dallas, March 18-20
Eighth Annual Postgraduate Alumni Meeting, Galveston, March 30

Orthopedic Surgery
Adult Salvage Orthopaedics, Temple, March 25-27

Pathology
Current Problems in Liver Disease, Houston, March 30

Pediatrics
Annual Conference in Pediatrics, Temple, March
Pediatric Potpourri, Galveston, March 14-15

Psychiatry
Intensive Review of Psychiatry, Houston, March 13-April 17

Surgery
Evaluation of Trauma Patients, San Antonio, March 22-23

APRIL

Anesthesiology
Anesthesia for Open Heart Surgery, Houston, April 4-6

Chest Disease
Respiratory Diseases, Houston, April 30-May 21

Health Services for College and University Population
52nd Annual Meeting of the American College Health Association, Dallas, April 2-5

General Medicine
Winans Visiting Professorship, Dallas, April 14-19
Nuclear Medicine—Its Use in Defining Disease, Houston, April 30-May 30

Medical Writing
Writing for Scientific Journals, Dallas, April 20

Obstetrics and Gynecology
Office Gynecology, San Antonio, April 27-28

Ophthalmology
Baylor College of Medicine, Department of Ophthalmology Alumni Conference, Houston, April 5-6
Retinal Symposium, Houston, April 13

Psychiatry
Family Therapy, Houston, April 6-7

Public Health and Preventive Medicine
Multiphasic Health Screening: Principles and Practice, Houston, April

MAY

Cardiovascular Disease
Texas Heart Institute Fifth Annual Symposium, Houston, May 30-June 1

Endocrinology
Endocrine Vignettes, Houston, May 7-28

General Medicine
Workshop in Sexual Counseling, San Antonio, May
Diagnosis Using Laboratory Methods, San Antonio, May 18-19
Medical and Dental Hypnosis—A Beginner's Guide, San Antonio, May 25
Renology—Current Trends in Diagnosis and Therapy, Laredo, May 25-26

Metabolism
Nutrition, Dallas, May 16-18

Ophthalmology
Semi-annual Clinical Conference, San Antonio, May

Orthopedic Surgery
Juvenile Arthritis and Other Arthropathies in Children, Houston, May 23-25

Otolaryngology
Otolaryngology and Head and Neck Surgery, Houston, May 16-18
Management of Carcinoma of the Larynx, Houston, May 24-25

Pediatrics
Newborn Seminar, Dallas, May
Postgraduate Pediatrics, San Antonio, May 4-5
12th Annual Teaching Conference, San Antonio, May 4-5
American Cancer Society's National Conference on Childhood Cancer, Dallas, May 16-18

Physical Medicine and Rehabilitation
Differential Diagnosis and Management of Muscular Weakness, San Antonio, May 31

Radiology
Radiation Biology and Radiological Physics for Radiologists, Dallas, May 31-June 2

Surgery
North Texas Chapter, American College of Surgeons, Annual Meeting, Dallas, May 18

JUNE

Cardiovascular Disease
Cardiac Drugs—A Therapy Seminar; Evaluation of the Patient with Coronary Artery Disease, Fort Worth, June 21

General Medicine
Clinical Hematology, San Antonio, June 1-2
Obesity—Successful Management, San Antonio, June 15
Hearing and Not Hearing—A Short Course, San Antonio, June 8

Medical Writing
Medical and Technical Writing, Houston, June

Ophthalmology
Ultrasonography in Ophthalmology, Houston, June

Pediatrics
Eighth Annual Pediatrics Postgraduate Course, Dallas, June 7-8

JULY

Ophthalmology
Ophthalmology Grand Rounds, Houston, July 1-June 30
Conference in Fluorescein Angiography, Houston, July 1-June 30
Clinical Pathological Conference in Ophthalmology, Houston, July 1-June 30
Ophthalmology for Family Physicians, Houston, July 20

Radiology
External Beam, Interstitial and Intracavitary Dosimetry—Principles, Houston, July 1-12

AUGUST

Dermatology
Dermal Pathology, Houston, August 19-23

Pediatrics
Psychological Assessment of Children, San Antonio, August 3

SEPTEMBER

General Medicine
Deciding on Neurosurgery, San Antonio, September 20-21

Internal Medicine
Advanced EKG Course, San Antonio, September 13-14

Obstetrics and Gynecology
Prostaglandins, Houston, September

Ophthalmology
Ophthalmology Basic and Clinical Science Course; Integrated Lecture Series, Houston, September 1-June 30

Physical Medicine and Rehabilitation
Annual Browning Seminar in Physical Medicine, Dallas, September

Surgery
G. V. Brindley Lecture in Surgery, Temple, September

OCTOBER

Basic Sciences
The Role of Basic Science in Therapeutic Decisions, San Antonio, October 9-November 13

General Medicine
Ophthalmology and Otolaryngology for Primary Care Physicians, San Antonio, October 18-19

Internal Medicine
Medical Intensive Care Course #2, San Antonio, October 10-December 13
Annual Conference in Medicine and Surgery, Temple, October

Psychiatry
Folk Medicine in Mexico and Southwestern United States, San Antonio, October 3

Radiology
Gilbert Lecture in Radiology, Dallas, October

Urology
Postgraduate Seminar in Urology, Dallas, October 25-27

NOVEMBER

Obstetrics and Gynecology
Bunkley Seminar in Obstetrics and Gynecology, Temple, November
Diseases of the Vulva and Vagina, Houston, November 6-8

Ophthalmology
Pediatric Ophthalmology Symposium, Houston, November 9

Orthopedic Surgery
Upper Extremity Trauma, San Antonio, November 20-22

Urology
Urologic Pathology, Houston, November 14-January 30

DECEMBER

Internal Medicine
Annual Meeting, December

Ophthalmology
Hermann Hospital Annual Ophthalmology Alumni Meeting, Houston, December

1974 MEDICAL MEETINGS IN TEXAS

AMERICAN ACADEMY OF FORENSIC SCIENCES, Dallas, Feb. 13-16, 1974. Harlan L. Kimball, PO Box 302, New Hartford, Conn. 06057, Exec. Off.

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Dallas, Oct. 6-10, 1974. Dr. C. M. Kos, 15 Second St., SW, Rochester, Minn. 55901, Sec-Treas.

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Dallas, Jan. 17-22, 1974. Charles V. Heck, 430 N. Michigan Ave., Chicago 60611, Exec. Dir.

AMERICAN ACADEMY OF PEDIATRICS, TEXAS CHAPTER, El Paso, Sept. 20, 1974. Dr. Paul Meyer, 3121 Procter, Port Arthur 77640, Sec.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, STATE OF TEXAS, Austin, Jan. 21-22, 1974. Mrs. Maurine Hensley, Rt. 4, Box 250, Tyler 75701, Sec.

AMERICAN COLLEGE OF CHEST PHYSICIANS, TEXAS CHAPTER, Houston, May, 1974. Dr. Byron N. Dooley, 7711 Louis Pasteur, San Antonio 78229, Pres.

AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER, Dallas, May 18, 1974. Dr. Ronald C. Jones, Dept. of Surgery, UT Health Science Center at Dallas, 5323 Harry Hines Blvd., Dallas 75235, Sec-Treas.

AMERICAN COLLEGE OF SURGEONS, SOUTH TEXAS CHAPTER, Temple, Feb. 1-2, 1974. Dr. Peter B. Fisher, 615 Medical Towers, Houston 77025, Sec-Treas.

AMERICAN LUNG ASSOCIATION OF TEXAS, San Antonio, Mar. 22-23, 1974. Mrs. Pauline K. Matthis, 2406 Manor Rd., Austin 78722, Mng. Dir.

AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, Galveston, May 24-26, 1974. Geraldine Midgley, PO Box 1287, Uvalde 78801, Exec. Sec.

AMERICAN PSYCHIATRIC ASSOCIATION, TEXAS DISTRICT BRANCH, Houston, May 11, 1974. Iris Wenzel, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

AMERICAN SOCIETY FOR SURGERY OF THE HAND, Dallas, Jan. 15-17, 1974. Dr. Ray A. Elliott, 23 Hackett Blvd., Albany, NY 12208, Pub. Com.

BLACKFORD MEMORIAL LECTURES, Denison, Sept. 7, 1974. Dr. John D. Gleckler, 211 N. Fannin, Denison 75020, Chrmn.

CONFERENCE OF CITY AND COUNTY HEALTH OFFICERS, Houston, May, 1974. Dr. J. E. Peavy, 1100 W. 49th St., Austin 78756, Chrmn.

DALLAS SOUTHERN CLINICAL SOCIETY, Dallas, Mar. 18-20, 1974. Robert L. Heath, 433 Medical Arts Bldg., Dallas 75201, Exec. Off.

EIGHTH DISTRICT MEDICAL SOCIETY, April 15, 1974. Dr. Stanley Thompson, 1108 Morton St., Richmond 77469, Exec. Off.

FIFTH DISTRICT MEDICAL SOCIETY, San Antonio, March 1, 1974. S. E. Cockrell, Jr., 202 W. French Pl., San Antonio 78212, Exec. Off.

FIRST DISTRICT MEDICAL SOCIETY, El Paso, Feb. 1-2, 1974. Dr. John Emmett, 612 University Towers, El Paso 79902, Sec.

INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS, San Antonio, Feb. 28-Mar. 1, 1974. S. E. Cockrell, Jr., 202 W. French Pl., San Antonio 78212, Exec. Off.

LASALLE-FRIO-DIMMIT COUNTY MEDICAL SOCIETY, Catarina, Tex., Mar. 5, June 4, Sept. 3, Dec. 3, 1974. Dr. Dorothy M. Brown, PO Box 53, Catarina, Tex. 78836, Sec-Treas.

NINTH DISTRICT MEDICAL SOCIETY, Sealy, Mar. 21, 1974. Mrs. R. C. Torrence, 103 Jesse H. Jones Library Bldg., Houston 77025, Exec. Dir.

TEXAS ACADEMY OF FAMILY PHYSICIANS, Galveston, Nov. 9-13, 1974. Donald C. Jackson, 1905 N. Lamar Blvd., Austin 78705, Exec. Dir.

TEXAS AIR-MEDICS ASSOCIATION, Houston, May 9, 1974. Dr. C. F. Miller, PO Box 1338, Waco 76703, Sec-Treas.

TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Galveston, March 8-9, 1974. Dr. Dennis M. Voulgaris, 2100 N. Fulton, Wharton 77488, Sec.

TEXAS ASSOCIATION OF PHYSICIANS IN NUCLEAR MEDICINE, Houston, May, 1974. Dr. Robert Parkey, 5323 Harry Hines Blvd., Dallas 75235, Sec.

TEXAS COMMISSION ON ALCOHOLISM, Austin, July 7-11, 1974. Wayne L. Ewen, 809 Sam Houston State Office Bldg., Austin 78757, Dir. of Training.

TEXAS DENTAL ASSOCIATION, Dallas, Apr. 28-May 1, 1974. Dr. Joe C. Carrington, Jr., 4920 N. Interregional Hwy., Austin 78751, Exec. Off.

TEXAS DERMATOLOGICAL SOCIETY, Houston, May 11-12, 1974; Honolulu, Oct., 1974. Dr. E. P. Schoch, 3 Medical Arts Sq., Austin 78705, Sec.

TEXAS DIABETES ASSOCIATION Houston, May, 1974. Dr. Eric A. Orzeck, 918 Medical Twrs., Houston 77025, Sec.

TEXAS HEART INSTITUTE, Houston, May 30-June 1, 1974. Dr. R. J. Hall, PO Box 20269, Houston 77025, Med. Dir.

TEXAS HOSPITAL ASSOCIATION, Dallas, May 18-22, 1974. Anthony Owens, 6225 US Hwy 290E, Austin 78723, Dir., Edu. and Pub. Info.

TEXAS INDUSTRIAL MEDICAL ASSOCIATION, Houston, May 10, 1974. Dr. William McClellan, PO Box 2100, Houston 77001, Pres-Elect.

TEXAS MEDICAL ASSOCIATION, Austin, Jan. 18-20, 1974; Houston, May 8-12, 1974; Austin, Sept. 20-21, 1974; Austin, Nov. 2-3, 1974. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

TEXAS NURSING HOME ASSOCIATION, Houston, Nov. 20-22, 1974. Sidney D. Rich, 6225 Hwy. 290E, Austin 78723, Exec. VP.

TEXAS OPHTHALMOLOGICAL ASSOCIATION, Houston, May, 1974. Dr. C. A. Struve, PO Box 6374, Corpus Christi 78411, Sec-Treas.

TEXAS ORTHOPAEDIC ASSOCIATION, Houston, May, 1974. Dr. John A. Murray, 5401 Caroline, Houston 77004, Prog. Chrmn.

TEXAS OTOLARYNGOLOGICAL ASSOCIATION, Houston, May, 1974. Dr. John W. Youngblood, 505 Medical Park Tower, Austin 78705, Sec.

TEXAS PEDIATRIC SOCIETY, El Paso, Sept. 19-21, 1974. Dr. George M. Waddill, 2308 W. 8th, Amarillo 79106, Exec. Off.

TEXAS PHARMACEUTICAL ASSOCIATION, Houston, July 21-25, 1974. Luther R. Parker, PO Box 4487, Austin 78701, Exec. Dir.

TEXAS PHYSICAL MEDICINE AND REHABILITATION SOCIETY, Houston, May, 1974. Dr. Robert Sine, 9200 Westheimer, Houston 77042

TEXAS PROCTOLOGIC SOCIETY, Houston, May 9, 1974. Dr. W. Bailey, 712 N. Washington, Dallas 75246, Sec.

TEXAS PUBLIC HEALTH ASSOCIATION, Houston, Feb. 17-20, 1974. Robert E. Monroe, 1117 W. 42nd, #201, Austin 78756, Exec. Sec.

TEXAS RADIOLOGICAL SOCIETY, San Antonio, Mar. 21-23, 1974. Dr. Francis E. O'Neill, 1128 Nix Prof. Bldg., San Antonio 78205, Sec-Treas.

TEXAS RHEUMATISM ASSOCIATION, Houston, May, 1974. Dr. J. E. Norris, 6448 Fannin, Houston 77025, Pres.

TEXAS SOCIETY OF ANESTHESIOLOGISTS, Houston, May, 1974. Dr. Cecil R. Glass, 2525 Calder Ave., Beaumont 77702, Sec.

TEXAS SOCIETY OF ATHLETIC TEAM PHYSICIANS, Houston, May 10, 1974. Dr. Bob L. Staíford, 8 Medical Dr., Amarillo 79106, Sec.

TEXAS SOCIETY OF INTERNAL MEDICINE, Fall, 1974. Dr. O. R. Hollan, 703 Nix Prof. Bldg., San Antonio 78205, Pres.

TEXAS SOCIETY OF PATHOLOGISTS, McAllen, Jan. 25-27, 1974. Dr. James Stinson, 2401 S. 31st, Temple 76501, Sec.

TEXAS SOCIETY OF PLASTIC SURGEONS, Houston, May 9-11, 1974. Dr. Jeff Moore, PO Box 3755, Amarillo 79106, Sec.

TEXAS SURGICAL SOCIETY, Houston, Mar. 31-Apr. 2, 1974; Fort Worth, Oct. 6-8, 1974. Dr. Robb H. Rutledge, 901 S. Lake, Fort Worth 76104, Sec.

TEXAS UROLOGICAL SOCIETY, Fort Worth, Apr. 4-6, 1974. Dr. Hugh Lamensdorf, PO Box 11340, Fort Worth 76109. Sec.

TOM GREEN EIGHT COUNTY MEDICAL SOCIETY, San Angelo, Oct., 1974. Dr. Wm. T. Gordon, Jr., PO Box 1879, San Angelo 76901, Pres.

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TexasMedicine

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Masked epilepsy

Surgery for rheumatoid arthritis

Report on legislative conference

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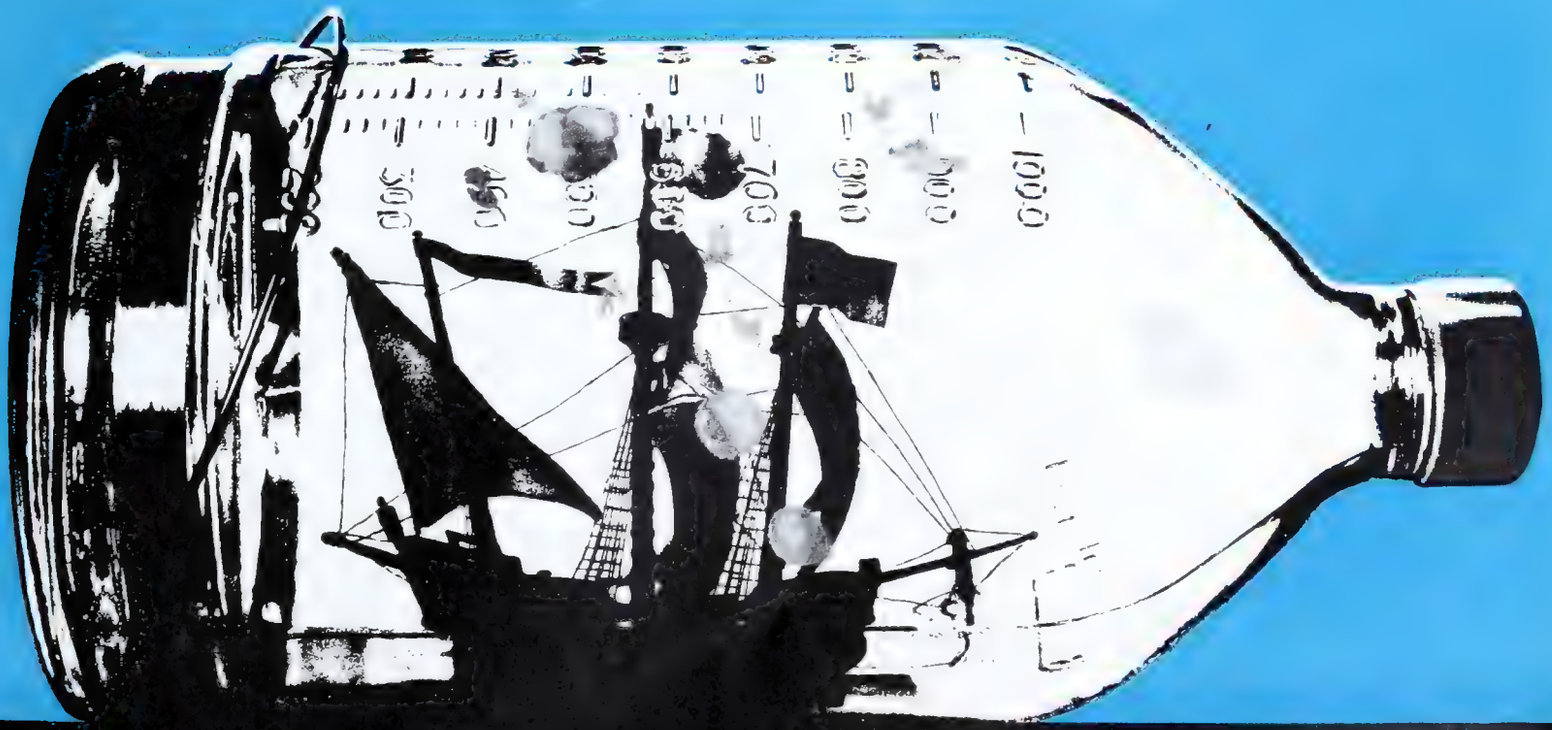

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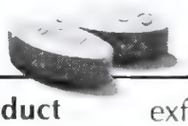

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Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia in elderly patients on diuretics, primarily thiazides. Sore throat, fever, pallor or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. Data are insufficient to recommend use in infants and children under 12.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, allergy or bronchial asthma; and in those with glucose-6-phosphate dehydrogenase deficiency, where hemolysis may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

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Contents

SCIENTIFIC ARTICLES

53 Masked epilepsy; a current perspective
Dr. Charles M. Bradshaw

56 Surgery for the patient with rheumatoid arthritis
Dr. Paul R. Lipscomb

65 Extraskeletal chondrosarcoma
Dr. Jerry P. Moore;
Dr. Emmet Shannon

69 Velopharyngeal incompetence
Dr. Peter Randall

76 When to use cortical bone grafts
Dr. Paul R. Lipscomb

83 Retinal detachment following congenital cataract surgery
Dr. Bruce C. Taylor;
Dr. William S. Tasman

90 Human myiasis as a complication of stasis dermatitis
Dr. James H. Herndon, Jr.;
Dr. Joseph M. Glicksman

94 Initial responses to grief; the physician's problems and opportunities
Rev. Robert E. Buxbaum

EDITORIALS

146 Emergency medical services; a physician responsibility
Dr. Robert L. Donald

150 Proposed act would socialize US medicine
Dr. Charles B. Dryden

FEATURES

107 An artistic adventure or if you smell smoke, it's probably just your shirt-tail
Dr. Sam Jagoda, Jr.

111 Telemetry increases scope of Houston's emergency services

NEWS

6 Winter conference spotlights legislative activities

10 PSRO major topic of Exec Board

18 MDs sought for disability exams

19 Registration required under drug law

19 Annual Session

20 TMF grant

20 Joint A&M/Baylor program

23 10th AMA delegate

23 Career brochure

23 Health spending up

23 New Baylor affiliations

25 Transplant reports

25 Sarcoma referrals

25 No polio in 1973

26 AHA guide

26 Taxpayer's Medicaid expense

26 Accounts management courses

27 JCAH policies

27 FP residencies approved

27 Index available

DEPARTMENTS

28 Capital Comments

34 Coming Meetings

47 Continuing Education

103 Information for Authors

115 Medicine and the Law

117 Questions/Answers

118 Changing face of Texas Medicine

119 Medicine in Literature

121 Personals

123 Recent Deaths

ON THE COVER

In their few scattered moments of relaxation, Texas physicians delve into interesting, diverse, and unusual avocations. A collection of hobby articles, beginning in this issue on p 107, will be carried throughout the coming year.

NEXT MONTH

Next month there will be articles on pituitary tumors, hyperviscosity in IgG myeloma, carcinoma secondary to rectal tuberculosis, and endobronchial occlusive lymphoma. Also included will be an article on physician participation on hospital governing boards, and pediatric grand rounds from Baylor College of Medicine. Please share in the tribute to Egerton V. Davis, whose occasional tongue-in-cheek reports amazed and amused an earlier generation of physicians.

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NEWS

Winter conference spotlights legislative activities

Physician awareness of and participation in legislative activities was a recurring theme during the 1974 Conference on Legislation and Medical Service Jan 19. The Conference highlighted a weekend of TMA activities in Austin including orientation, committee, board, and council meetings culminating in the actions of the Executive Board. More than 630 participants were registered for the conference and orientation program held in the Joe C. Thompson Conference Center.

Leading off the impressive list of guest speakers was Dr. Mouzon Biggs, Jr. (DD) of Houston's First Methodist Church. Dr. Biggs' remarks were directed to the personal rather than professional lives of his listeners. He told the conferees that the true marks of greatness were in one's ability to answer four questions: Who are you? What do you know? What do you love? What are you willing to do? Through a series of illustrations and personal anecdotes Dr. Biggs showed the physicians ways to develop marks of greatness in their lives.

The second conference speaker, Dr. Malcolm C. Todd of Long Beach, Calif, American Medical Association president-elect, answered one of Dr. Biggs' challenges saying that what physicians have to give is medicine's number one priority—rendering service to people. Of medical care today Dr. Todd said the quality was never better, standards never higher, and the population never healthier. Dr. Todd, also naming manpower as a major priority, said that it is necessary to see that medical care is made accessible to medically deprived areas. He identified other priorities facing medicine in the coming year as the training of more primary care physicians, legislation, the confidentiality of physician-patient relations, and health education.

A political look at 1974

The conference participants gave a warm reception to the remarks of

US Representative Bill Archer (third from right) greets physicians following his talk.

State Senator Betty Andujar

the Honorable Bill Archer of Houston, US representative from the 7th congressional district. Representative Archer said that increasingly decisions are being made in Washington which affect the quality of care patients are to receive. He said that 1974 may be the toughest year for every doctor and every patient in the United States. Representative Archer discussed congressional actions regarding the areas of Professional Standards Review Organizations and Health Maintenance Organizations. He told the doctors of their alternatives in preventing moves which are counterproductive to medicine. He said they could attempt to compromise issues or they could take the offensive and demonstrate the arguments for private medicine, which he urged them to do. In the question and answer period, Congressman Archer said that the single most effective thing that doctors can do to help in the repeal of PSRO legislation is to contact their individual congressmen and get the doctors' message across to them. He also commented, in response to questioning, on the recommendation of the House Select Committee on Committees to transfer non-tax health jurisdiction from the House Ways and Means Committee to the new House Commerce and Health Committee. He said separating the benefits from the revenue raising aspects of health programs would create the "white hats" and the "black hats" in Congress. He said this was another major challenge for the American people to respond to immediately so that these two entities are not split. He said he felt that such an action would make a balanced budget impossible.

The second morning session of the conference was a panel session entitled "Representing the Physicians of Texas." Panel members were Dr. Milton V. Davis of Dallas, member of the steering committee for the Texas Institute for Medical Assessment (TIMA); Dr. Joseph T. Ainsworth of Houston, chairman, TMA Council on Medical Legislation; Ace Pickens, JD, TMA assistant general counsel; and Dr. Joseph T. Painter of Houston, chairman, TMA Council on Tax-Financed Health Care Programs.

MDs voice opinions on PSRO

Dr. Davis discussed the functions and background of PSROs. He announced the results of a recent poll of more than 10,000 TMA members. The following is based on the 3557 replies received at that time. Support TMA position on PSRO-3078. Not support TMA position-209. Favor repeal of PSRO by Congress-3172. Not in favor of repeal-245. Support TIMA-2726. Not in support of TIMA-309.

Mouzon Biggs, Jr., DD

Dr. Malcolm C. Todd

Dr. Ernest B. Howard

William J. Colley, JD

NEWS

Three afternoon panel participants, (l-r) Philip R. Overton, LLB, Dr. Richard D. Haines, and Dr. G. V. Brindley, Jr., exchange ideas.

Favor HEW regulations for eight Texas areas-135. Not in favor of HEW regulations-2802. Will participate voluntarily in PSRO-846. Will participate if required—2282. Will not participate at all-46. (Additional information regarding the poll was carried in the January *TIMA Newsletter.*)

Dr. Ainsworth urged each physician to become familiar with the area of health maintenance organizations (HMOs). He said their support would undoubtedly be needed and sought during the next session of the Texas Legislature to support TMA's position in proposed legislation concerning this matter as it relates to the control of medicine.

Mr. Pickens discussed the current Constitutional Convention and the importance of Article XVI, Section 31 of the Texas Constitution regarding the practice of medicine. (For background, see Medicine and the Law, p. 115, *Texas Medicine*, November, 1973; Editorial, p. 148, *Texas Medicine*, December 1973.) Mr. Pickens said this section was one of only two items from the 282 sections reviewed by the Texas Constitutional Revision Commission which were recommended for retention as originally worded in the Constitution.

Dr. Painter said physicians should be aware of governmental health programs in Texas and how they affect each individual doctor. More than just Medicare and Medicaid, these programs also include comprehensive health planning, programs of review, OEO projects, services in mental health, and others. He emphasized the importance of physician input in the shaping of the tax-supported programs. He invited doctors to write letters to the Council describing their own problems so that TMA can focus its attention on the major areas of concern in this matter.

Fee-for-service—fundamental

Opening the afternoon session of the conference was Dr. Ernest B. Howard of Chicago, AMA executive vice president. Dr. Howard stressed the importance of the fee-for-service approach not only to the medical profession, but to other professions as well. On the subject of national health insurance, he told the physicians to stop talking about inevitability. In answer to the question posed in the title of his talk, "What's Emerging?" Dr. Howard answered he doesn't believe Congress can put a bill together which would be acceptable to all interests. He called the problem too "indigestible." He even suggested that there could possibly be a sharp turn in Congress' direction. Dr. Howard said that this country needs a "pause for breath" on this problem before there is a push to pass legislation. He said such a pause would allow programs to be formulated to meet the real needs in health care such as accessibility, malpractice, improvement of services, poverty, nutrition, and others.

William J. Colley, JD, of Washington, D.C., director, AMA congressional relations department, spoke on medical issues in Congress in 1974. Through many actual instances, the AMA lobbyist gave the physicians a flavor of the Washington atmosphere. Several items to which he alerted the physicians included the expected expiration in April of the Economic Stabilization Act and the possibility of an extension, the current drug hearings, and a new bill which would establish health care as a public utility.

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speak during the day represented the state level. She was Senator Betty Andujar of Fort Worth, from the state's 12th district. Senator Andujar told physicians that they are needed in the Legislature. She said she found her experience in the Legislature to be both "interesting and awesome." The senator urged the physicians to belong to and support TEXPAC.

NEWS

Current issues of concern

Closing the conference was a panel session on "Issues, Challenges, Programs, and Policies." Participants included Dr. G. V. Brindley, Jr. of Temple, member, Coordinating Board of the College and University System of Texas; Dr. Richard D. Haines of Temple, immediate past chairman, TMA Committee on Continuing Education; Dr. Richard D. Smith of Lubbock, chairman, TMA Committee on Workmen's Compensation and Industrial Health; and Philip R. Overton, LLB, TMA general counsel.

Dr. Brindley reviewed the medical education facilities in the state. He said the rapid rate of growth and expense of medical education in Texas is cause for concern, debate, and difference of opinion. He said the increasing numbers and changing roles of allied health personnel such as physician assistants, nurse consultants, and clinical pharmacists complicate projected estimates and emphasize the urgency for intelligent evaluation of the future needs for physicians. He said TMA and the Coordinating Board both have urged the Legislature to give first priority to full funding of our existing state medical schools.

On the subject of continuing education, Dr. Haines said that Texas has a unique situation if for no other reason than size. He stated that the two major deterrents to physician participation in continuing education programs are arranging for time off and the travel distance to the course. He emphasized the need for TMA to guide and direct a statewide program for continuing education.

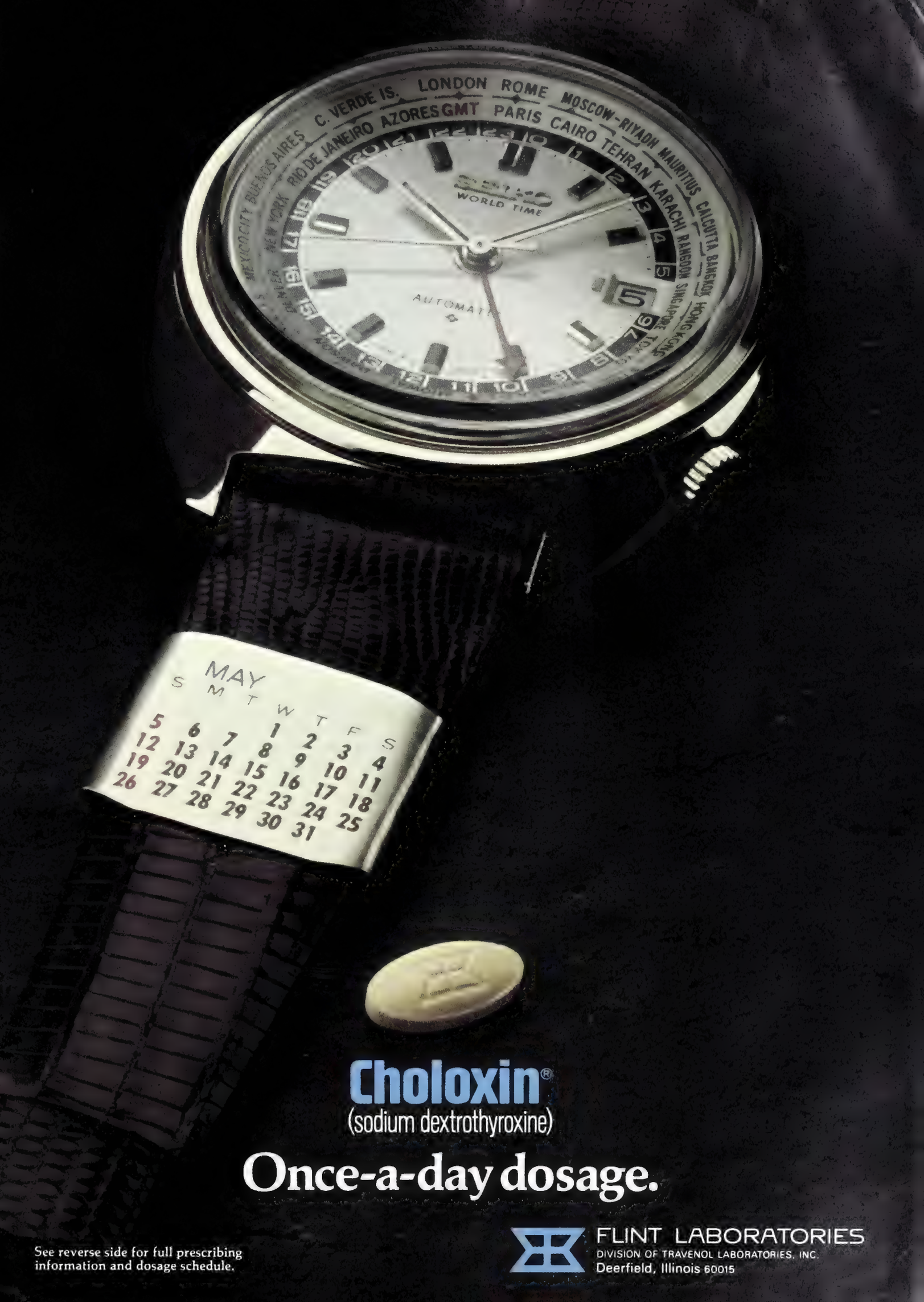
Dr. Smith discussed the changes in the Workmen's Compensation law and answered the physicians' questions regarding this matter. He advised physicians to become cognizant of the current regulations. (These changes are discussed in the Medicine and the Law column, p. 115.)

Mr. Overton spoke on the release of confidential medical information and TMA activities in creating a standard medical information release form acceptable to all involved parties. The TMA Board of Councilors is participating in these negotiations. Until an agreement is reached, however, Mr. Overton offered the physicians the following recommendations regarding the release of information. 1. Do not release information unless you are furnished with a current authorization; that is, one that has been executed within the past six month period. 2. Be sure the authorization is signed by your patient and dated. 3. Accept only those authorizations which list specifically to whom the information is to be furnished and further, that the information disclosed will be used only by the named company or person listed in the authorization. You should further verify that the authorization form lists you by name and not "bearer" or "to whom it may concern." 4. If there is any question in your mind as to the validity of that authorization for consent, take it up with your patient and don't furnish the information until the patient authorizes it.

PSRO major topic of Exec Board deliberations

PSRO again was the chief topic considered by the Texas Medical Association's Executive Board Jan 20 in Austin.

The Board reiterated its commitment to work toward the repeal of PSRO and, at the same time, because PSRO is now law, to seek to have Texas designated as a single statewide PSRO area. The status of PSRO will be reviewed by the Board at its next meet-



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Four strengths . . . 1, 2, 4, and 6 mg. . . . are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased by Increments of	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	monthly 1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	monthly 0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac Patients	0.5-1.0 mg.	monthly 1.0 mg.	4.0 mg.	4.0 mg.

Choloxin

(sodium dextrothyroxine)

Description
CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as D-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions
The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications
This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXIN dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications
The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings
CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN. As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may be advisable to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age
Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions
It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions
The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN; a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration
For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN is approximately 0.1 mg per kilogram. The initial daily dosage should be approximately 0.05 mg per kilogram to be increased in up to 0.05 mg per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied
CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

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Widely accepted Isordil Tembids Tablets are now joined by an additional sustained action form, Isordil Tembids Capsules, providing greater prescribing flexibility.

***Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:

"Possibly" effective: When taken by the oral route, Isordil (isosorbide dinitrate) is indicated for the relief of angina pectoris (pain of coronary artery disease). It is not intended to abort the acute anginal episode, but is widely regarded as useful in the prophylactic treatment of angina pectoris.

Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.

Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur. In patients with functional or organic gastrointestinal hypermotility or malabsorption syndrome, it is suggested that either the ISORDIL 5 mg. or 10 mg. Oral tablets or sublingual tablets be the preferred therapy. The reason for this is that a few patients have reported passing partially dissolved ISORDIL TEMBIDS tablets in their stools. This phenomenon is believed to be on the basis of physiological variability and to reflect rapid gastrointestinal transit of the sustained action tablet. TEMBIDS SHOULD NOT BE CHEWED.

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

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DEDICATED TO IMPROVING THE QUALITY OF LIFE, THROUGH MEDICINE

ing on March 23 in Austin.
Responding to a strong "grass roots" expression by the membership in the recent statewide poll, the Board directed the Council on Medical Legislation to review efforts to repeal PSRO, and to report back with recommendations.

Long-range planning

In keeping with its obligations to serve as the Association's long-range planning body and to establish liaison with other groups, the Board appointed a committee to project the Association's programs and activities and to designate priorities for the next five years. It also adopted a report to implement direct Board liaison with leaders of other organizations and Texas medical schools.
Brought to the Board's attention was a consideration by the Bureau of Health Insurance to offer a retainer fee option for physician reimbursement for chronic renal dialysis under Section 299L of PL 92-603. Physician reimbursement is currently through contract to the hospital. Dr. Joseph Painter, chairman of the Council on Tax-Financed Health Care Programs, reported that a fee-for-service option is not under active consideration by the BHI. The Executive Board reaffirmed support of the fee-for-service principle and expressed opposition to the proposed alternative method of reimbursement for a retainer fee and to the global fee requiring a contractual relationship with the hospital for professional services rendered for dialysis therapy.
The Board emphasized the need to transmit opposition to proposed Regulation 5 (preadmission by the hospital utilization review committee within 24 hours after admission). The regulation was published in the Jan 9 *Federal Register*. TMA is on record against the proposed regulations.
The Executive Board also expressed opposition to discriminatory limitations for reimbursement for routine office psychiatric therapy under Medicaid. Reimbursement is limited to 62.5% of the usual charge regardless of the specialty of the physician delivering the service.
Adopting a statement calling for the attending physician in a nursing home to direct all medical care delivered to his patient, the Board also said that if other services should be required they should be carried out only under the attending physician's direction.
Hazards of signing the Uniform Health Insurance Claim Form without blocking out the entire last paragraph were pointed out. The paragraph certifies the necessity for the services and acknowledges acceptance of Medicaid funds as payment in full.
The Board observed that these statements should be blocked out by an overprinting procedure rather than by merely crossing out the entire paragraph. Any claim form is acceptable if a physician bills his patients directly.

Other actions

Also approved were suggestions pertaining to endorsement of accreditation standards in physical education curriculum for schools; and approval for appointment of a TMA advisory committee to work closely with the Governor's Commission on Physical Fitness.
Additional recommendations for the Physician's School Bus Driver Disqualification Sheet were made by the Board. It was recommended that drivers should be automatically disqualified if they do not meet the following standards: "Applicant's hearing must be a minimum of 10/15 by whispered voice. Hearing aid is permissible." and "Applicant's vision is less than 20/200 uncorrected in each eye; applicant's vision is less than 20/30 correction in each eye; applicant cannot readily distinguish red, green, and yellow; applicant's lateral peripheral field of vision is less than 70° in each eye."

NEWS

SEAVIEW PSYCHIATRIC HOSPITAL

Announces an expanded specialized program for the patient with acute physical, psychological and social problems. Complete diagnostic and therapeutic services are offered in an open environment conducive to recovery. Bilingual professional and support staff.

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PRESCRIBING INFORMATION

Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

WORMS BLITZED

A single dose of Antiminth (1 cc. per 10 lbs. of body weight, 1 tsp./50 lbs.—maximum dose, 4 tsp.=20 cc.) offers highly effective control of *both* pinworms and roundworms.

Antiminth has been shown to be extremely well tolerated by children and adults alike in clinical studies.* Pleasantly caramel-flavored, it is non-staining to teeth and oral mucosa on ingestion... doesn't stain stools, linen or clothing.

One prescription can economically treat the entire family.

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Pinworms, roundworms controlled with a single, non-staining dose of

ANTIMINTH®

(pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

*Data on file at Roerig.

Please see prescribing information on facing page.

NEWS

Physicians sought to perform disability exams

The Texas Rehabilitation Commission, through its Division of Disability Determination, is actively recruiting physicians throughout Texas to perform consultative examinations for medical documentation of disability claims.

In addition to its determination of the eligibility of disabled Texans for benefits under the blindness and disability programs of Social Security, the Division has assumed the responsibility of disability determination for the new federal Supplemental Security Income (SSI) program. Under the SSI program, effective Jan 1, the Social Security Administration took over the financial responsibility of state Aid to the Permanently and Totally Disabled welfare programs. This new responsibility has meant a doubling of the number of disability claims received by the Division and the demand for special medical examinations. (During the 12-month period ending June 30, 1973, the Division had acted upon more than 65,000 Social Security disability claims.)

In approximately 20% of the claims received by the Division, medical information of a more specific nature than provided by the claimant's source is needed. Often, the need is simply for more current information. These examinations are paid for by the Division in accordance with the Commission's payment schedule for medical services. In the past, emphasis has been placed on the need for examining specialists in internal medicine, orthopedics, neurology and so forth. However, the changing nature of the programs administered by the Division has led to a call for specialists in family practice and pediatrics to perform examinations for the Division.

The physician who agrees to perform such examinations for the Division is essentially providing current and detailed evidence of objective findings. The examining doctor is never called upon to make subjective judgments of whether the individual being examined is or is not under a "disability." Unlike examinations for workmen's compensation and similar programs, percentages of disability are never asked to be computed. The Division looks for a full and detailed report of what the doctor sees. Very often the examination is directed toward a specific area or impairment, such as the circulatory system or the musculoskeletal system.

The physician's report is reviewed in the Division's Austin offices by a medical consultant-disability examiner team from the Division's staff. If specific questions remain unanswered, the examining doctor may be contacted but seldom is it necessary to ask the claimant to return for a follow-up exam. Treatment is never prescribed, and the examining doctor is never asked to decide whether or not the claimant is able to work. That decision is left solely up to the review team in Austin.

The use of the review team assures that the medical documentation provided by a disabled claimant receives professional, competent review. Together, the medical consultant and the disability examiner determine if the claimant has lost the ability to perform substantial work by reason of a medically determinable physical or mental impairment which can be expected to result either in death or to last 12 continuous months. Additionally, each claimant's case is reviewed to determine if rehabilitative services would benefit the claimant. Last year, over 10,000 individuals were referred to vocational rehabilitation counselors for further evaluation and, if feasible, services.

Dr. Marvin C. Schlecte is the administrative medical consultant for the Commission, and Dr. Albert Vickers is the chief of medical services for the Division. Physicians interested in performing consultative exams should either call or write the Texas Rehabilitation Commission's Division of Disability Determination, One Chevy Chase, Austin, Tex 78752.

Registration required under Texas drug law

The 63rd Texas Legislature enacted a drug reform law effective August, 1973, which requires state registration of physicians, dentists, pharmacists, veterinarians, and hospitals similar to the registration presently required by the Drug Enforcement Association (formerly BNDD).

This dual registration and fee is typical of Controlled Substances Acts passed in many states in recent years.

The Texas State Board of Medical Examiners is required to collect the physician's registration fee and turn it over to the Department of Public Safety which is charged with enforcement of the Act.

The rules and regulations adopted by the DPS provide for: 1. Registration and payment of $5 fee for all physicians who intend to dispense, administer or prescribe drugs (with *separate* registration and fee for *each office* location where drugs are stored). 2. Scheduling of drugs in the identical manner as drugs scheduled under federal law. 3. DEA number (formerly BNDD) *only* on prescriptions issued, ie, no necessity for State Registration Number on prescriptions. 4. Revocation of State Registration for false information on application, conviction of felony, suspension of medical license, refusal to allow inspection of records required to be kept, and like offenses. 5. Establishment and maintenance of security controls over drugs kept in office. 6. Drug records maintained in manner required by federal law. 7. Confidentiality of patient names and patient records (provided drug inventory records are not commingled with patient records).

The full text of the Rules was mailed to each physician along with registration material in January. The booklet should be retained for reference should questions arise concerning this important new legislation. A complete list of scheduled drugs is available from the Drug Enforcement Administration, 1405 I St, NW, Washington, DC, 20533.

Annual Session to offer variety of programs, events

Plans for the 107th Annual Session of the Texas Medical Association, May 9-12 in Houston, will be completed shortly.

In January the Council on Annual Session received final programs from section, related organization, and committee officers for the Houston meeting. Seventeen scientific sections, 35 related medical organizations, and 12 TMA committees will be participating in the 1974 Session. A variety of programs are planned, some general in nature to encompass an overview of trends in medicine; others more specific to aid in particular specialty areas. The Session will provide a balance of programs according to subject matter, geographical distribution of speakers, and participation by physicians representing numerous fields of endeavor.

The Council has urged the development of programs that will provide physicians with an opportunity to participate more actively in the sessions. Emphasis will be placed on group discussions, rather than the formal lecture-type presentations. The Continental Breakfast Presentations and the Curbstone Consultations Program will be continued as part of the emphasis on physician participation.

The general format of the Annual Session will remain essentially the same as last year's meeting with heavy programming on Thursday, Friday, and Saturday.

Social events will include class reunions, fraternity parties, and other alumni functions being planned for the evenings. Arrangements have been made with Astroworld Hotel for a Saturday (May 11) party including a cocktail party, dinner, and orchestra. Golf and tennis tournaments are also being planned for the Session.

A new type of social event has been proposed for the Annual Session by Dr. Jack Eidson of Weatherford. Dr.

NEWS

Eidson is organizing a gourmet evening for wine enthusiasts Thursday, May 9 at 8 pm. Details are being formulated at this time. Dr. Eidson has prepared an article on his interest in wine entitled "Oenophiles Unite," which will appear in the March issue of *Texas Medicine*. Dr. Eidson requests that all physicians interested in such a gathering contact him at P.O. Box 696, Weatherford, Tex 76086.

The Advance Program and Guide to Houston for the Annual Session is being prepared and is expected to be distributed to TMA members, speakers, and medical students in March.

TMF to review care in mental facilities

The Texas Medical Foundation has tentatively been awarded a grant of $424,000 to conduct a review of medical care in the state's 22 institutions for the mentally handicapped. The grant was presented by the Texas Department of Mental Health and Mental Retardation.

The assessment procedure will consist of several phases. A nurse coordinator will be sent to the institutions to abstract a sound sampling of the medical records. A visiting team of physicians will review the abstracts which the nurse has prepared to determine if the care rendered meets acceptable quality levels. The physician team will have primary care, psychiatric, and pathology representation. Death reviews will also be conducted.

Findings will be reported to Dr. David Wade, commissioner of MH-MR. Subsequent periodic review will enable the review team to determine progress and effectiveness of the program. The teams will make three or four visits a year or about 440 days of physician evaluation. Review teams will be drawn from the general geographical areas of the institutions. Information obtained will also be employed in the MH-MR internal staff education and training program.

A&M, Baylor establish joint medical program

Dr. Hebbel E. Hoff, chairman of physiology and associate dean for faculty and clinical affairs at Baylor College of Medicine, has been named dean of medicine pro tem for the joint Texas A&M University/Baylor College of Medicine program in medicine.

Dr. Hoff will head the medical education programs of the two schools leading to the joint granting of the MD degree by the institutions. Implementation of the program was recently approved by the Coordinating Board of the Texas College and University System. The program will begin in September with an enrollment of 16 students.

The program enables students to begin their professional medical education at the end of the sophomore year of college. Students will take a two-year basic sciences program at A&M, receiving a BS upon completion. An additional two years of clinical work will be obtained at Baylor with graduates receiving an MD degree from Baylor College of Medicine/Texas A&M University.

Dr. Hoff, a Rhodes Scholar, received an MD degree from Harvard University and a PhD from Oxford University. He has been associated with Yale University School of Medicine and McGill University in Montreal. He is a Distinguished Service Professor at Baylor and has been actively involved in the development of the new joint medical education program.

Correction

An error appeared in the December issue of *Texas Medicine* regarding the amount of a grant to the Department of Community Medicine at Baylor College of Medicine by The Commonwealth Fund. The amount of the grant is $240,000 and is being used to develop new approaches to provide comprehensive health care to Houston's Mexican-American community.

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*Based on a review of this drug by the National Academy of Sciences—National Research Council, F.D.A. has classified this indication as "possibly" effective.

Please see following page for prescribing information, including adverse reactions, contraindications and warnings.

A Comprehensive Therapeutic Program for the G.I. patient

Enarax® (oxyphencyclimine HCl/hydroxyzine HCl) Tablets, as adjunctive therapy, can help relieve a wide range of gastrointestinal disorders—and their accompanying anxiety.* Without cooperation of the patient, however, no medicinal regimen can succeed entirely... an understanding of the condition, the factors involved in its development, and the proper approach to self-care are often basic to successful therapy.

To help save some of your valuable time in providing this background information, this specially designed G.I. Patient Relief Kit is available on request—a valuable addition to your overall therapeutic program.

In addition to a complimentary introductory prescription for **Enarax** Tablets, this handsome kit contains the information and appropriate stimuli to start the patient on a program of proper self-care:

Patient Information Booklet, "You and Your Digestive System"—easy-to-swallow advice on how to take care of the gastrointestinal tract, including diet information.

Sanka® **Decaffeinated Coffee** sample packets to provide an alternative to regular coffee with caffeine.

Gelusil® **Liquid** to help relieve heartburn, dyspepsia, gas, and flatulence between meals.

Money-saving coupon for future purchase.

You can obtain a quantity of these kits packaged for easy office storage by filling out the attached Prepaid Business Reply Card.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

*Based on a review of this drug by the National Academy of Sciences—National Research Council, F.D.A. has classified this indication as "possibly" effective.

includ

Please send me six G.I. Patient Relief Kits complete with complimentary prescription forms for an introductory supply of

Enarax® tablets
(oxyphencyclimine HCl/hydroxyzine HCl)

Name_____
(Please print or type)

ME#_____

Address_____

City_____

State_____ Zip_____

_____
Physician's Signature

To help control G.I. distress/calm psychic tension*

Enarax® tablets

(oxyphencyclimine HCl/hydroxyzine HCl)

- Combination provides for effective 12-hours antispasmodic/anticholinergic action of oxyphencyclimine with the calming action of Atarax® (hydroxyzine HCl).
- As adjunctive therapy, helps relieve a wide range of gastrointestinal disorders, and their accompanying anxiety—simultaneously. However, it should be used with caution in patients with ulcerative colitis.
- Avoids the confusion and expense of two medication schedules.
- Convenient b.i.d. dosage.
- Individualized therapy—Enarax® 5 (oxyphencyclimine HCl 5 mg./hydroxyzine HCl 25 mg.). Enarax® 10 (oxyphencyclimine HCl 10 mg./hydroxyzine HCl 25 mg.).
- Usually well tolerated; drowsiness or blurred vision may occur.

More detailed professional information available on request.

SEE REVERSE FOR FREE OFFER.

Composition
Each Enarax 5 tablet contains:
oxyphencyclimine HCl ..... 5 mg.
hydroxyzine HCl N.F. (Atarax)® 25 mg.

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Enarax may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery, or perform hazardous work while taking this drug.

Precautions. Anticholinergics should be used with caution in patients with:
autonomic neuropathy,
hepatic or renal disease,
ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon.
hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension and nonobstructing prostatic hypertrophy; hiatal hernia associated with reflux esophagitis, since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis).

The use of this drug in the presence of complication of biliary tract disease should not be relied upon.

Tachycardia should be thoroughly investigated before giving anticholinergic (atropine-like) drugs since they may increase the heart rate.

With overdosage, a curare-like action may occur.

Adverse Reactions. As with other anticholinergics, oxyphencyclimine HCl produces certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these.

Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis, dilatation of the pupil; cycloplegia, increased ocular tension; loss of taste; headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestation; some degree of mental confusion and/or excitement especially in elderly persons.

Decreased sweating is another adverse reaction that may occur. It should be noted that adrenergic innervation of the eccrine sweat glands on the palms and soles make complete control of sweating impossible. An end point of complete anhidrosis cannot occur because large doses of drug would be required, and this would produce severe side effects from parasympathetic paralysis.

Side effects which occasionally occur with hydroxyzine HCl (Atarax)® are drowsiness, xerostomia, and, at extremely high doses, involuntary motor activity, all of which may be controlled by reduction of the dosage or discontinuation of the medication.

Dosage and Administration. The recommended adult dose is usually one Enarax 5 or one Enarax 10 tablet two times a day or three times a day, depending on individual response. Proper diet and antacids should be used where indicated as concomitant therapy. The safe use of Enarax in children has not been established; therefore, the drug should not be used in children.

Drug Interactions. The potentiating action of hydroxyzine must be considered when the drug is used in combination with central nervous system depressants.

How Supplied. Enarax 5 is available as white scored tablets in bottles of 60. Enarax 10 is available as black and white scored tablets in bottles of 60.

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Issued November 1973

To help control G.I. distress/calm psychic tension*

Enarax® tablets

(oxyphencyclimine HCl/hydroxyzine HCl)

- Combination provides for effective 12-hours antispasmodic/anticholinergic action of oxyphencyclimine with the calming action of Atarax® (hydroxyzine HCl).
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SEE REVERSE FOR FREE OFFER.

Composition

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oxyphencyclimine HCl ..... 5 mg.
hydroxyzine HCl N.F. (Atarax)® ..... 25 mg.
Each Enarax 10 tablet contains:
oxyphencyclimine HCl ..... 10 mg.
hydroxyzine HCl N.F. (Atarax)® ..... 25 mg.

Description. Enarax is a combination of oxyphencyclimine HCl and hydroxyzine HCl. Oxyphencyclimine HCl is a crystalline substance characterized by the chemical formula: (1-methyl-1,4,5,6 tetrahydro-2-pyrimidyl-methyl alpha-cyclohexyl-alpha-phenylglycolate hydrochloride). It is soluble and stable in aqueous solutions.

Hydroxyzine HCl is designated chemically as 1-(p-chlorobenzhydryl)-4-[2-(2-hydroxyethoxy)-ethyl] piperazine dihydrochloride.

Actions. Oxyphencyclimine HCl provides long acting suppression of gastric secretion through its anticholinergic action. The mechanism of this action is the inhibition of acetylcholine at postganglionic cholinergic sites in structures innervated by postganglionic parasympathetic nerves and on smooth muscle not so innervated but responsive to acetylcholine.

Hydroxyzine HCl, marketed under the trade name, Atarax®, has been shown clinically to be an effective anti-anxiety agent. It induces a calming effect in anxious, tense individuals without impairing mental alertness. It is not a cortical depressant, but its action may be due to a suppression of activity on certain key regions of the subcortical area of the central nervous system.

***Indications.** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Possibly Effective: As adjunctive therapy in peptic ulcer; irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, functional gastrointestinal disorders); functional diarrhea; drug induced diarrhea; ulcerative colitis, and urinary bladder spasm and ureteral spasm (i.e. smooth muscle spasm).

Final classification of these less than effective indications requires further investigation.

Contraindications. Because of its anticholinergic activity, Enarax is contraindicated in the presence of glaucoma, obstructive uropathy (i.e. bladder neck obstruction due to prostatic hypertrophy), obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis, etc.); paralytic ileus; intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis.

Warnings. Hydroxyzine, when administered to the pregnant mouse, rat, and rabbit induced fetal abnormalities in the rat at doses substantially above the human therapeutic range. Clinical data in human beings are inadequate to establish safety in early pregnancy. Until such data are available, hydroxyzine-containing drugs are not advised in early pregnancy.

In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heatstroke due to decreased sweating).

Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful.

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Texas qualifies for 10th AMA delegate

The Texas Medical Association has qualified officially for a tenth seat in the House of Delegates of the American Medical Association starting at the 1974 Annual Meeting in June.
Texas reported 9,210 active members in the AMA for 1973. This is an increase of 318 over the previous year.
Representation in the AMA House of Delegates is determined on the basis of one delegate for each 1,000 dues-paying and dues-exempt AMA members, and one for each fraction above that number.
The qualification for a tenth delegate reflects the continued membership growth of TMA.
There are a total of 9,497 Texas physicians who hold membership in the AMA. That figure includes 287 associate members who do not count in the determination of the number of state society delegates.
The TMA House of Delegates will elect the tenth delegate as well as an alternate delegate at the 1974 Annual Session in Houston in May.

Brochure outlines dental, medical careers

A new brochure, "Careers in Dentistry and Medicine—64 questions and answers," has been published by The University of Texas System.
The purpose of the brochure is to make available the maximum amount of information possible to potential applicants. The brochure will assist potential applicants in making a career decision as well as in the application process.
The brochure was compiled by the System's Media Development Committee with assistance from applicants, students, and health professions advisors. Members of the committee include Dr. Fred Christen, UT Southwestern Medical School at Dallas; Betty Compton, UT Medical School at San Antonio; Dr. Jack Hartley, UT Dental School at San Antonio; Dr. Horace Hartsell, UT Dental Branch at Houston; Dr. Arthur Katser, UT Medical School at Houston; Gene Powell, UT Medical School at Galveston; Billy Rankin, UT System Medical and Dental Application Center; Jack A. Rodgers, UT Medical School at San Antonio; Dr. Glenn Walters, UT Dental School at San Antonio; and Dr. Shailer Peterson, special consultant, UT Dental School at San Antonio.
Several questions and answers from the brochure are carried this month in the "Questions/Answers" column.

Federal health spending up

Preliminary Social Security Administration figures show that during the fiscal year ending last July 7 health spending totaled $94.1 billion, an 11% increase over fiscal 1972.
The rate of increase was the lowest in several years and the proportion of health spending to the gross national product remained at the 1972 level of 7.7%. In the fiscal year 1973, 60.1% of the health spending was private; 39.9% public. Federal spending rose almost $2 billion continuing the trend toward more government spending. State and local spending was $12.9 billion up more than $1.5 billion.

Temple institutions affiliate with Baylor

The Scott and White Clinic, Scott and White Memorial Hospital, and Scott, Sherwood and Brindley Foundation of Temple have formally affiliated with Baylor College of Medicine.
The affiliation agreement provides for mutual cooperation for the public benefit through the advancement of medical services, medical investigation, and expanded training of medical and ancillary personnel.
Scott and White and Baylor officials have appointed a joint Policy and Planning Committee to coordinate common programs including medical education, recruitment of faculty and

The Rx that says "Relax"

BUTISOL Sodium provides highly predictable sedative effec minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage form and 4 strengths to make adjustments easy.)

BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action: begins to work within 30 minutes…yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

BUTISOL Sodium is remarkably well tolerated: a 30-year safety record assures you that there is little likeliho of unexpected reactions.

BUTISOL Sodium saves your patients money: costs less than half as much as most commonly prescribed sedative tranquilizers.*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

*Based on surveys of average daily prescription costs.

Butisol C III SODIUM
(SODIUM BUTABARBITAL)

Contraindications: Sensitivity or idiosyncracy to barbiturates; history of manifest or latent porphyria or marked liver impairment; respiratory disease with dyspnea or obstruction; history of addiction to sedative/hypnotic drugs; uncontrolled pain, to avoid because of possible excitement.
Precautions: Exercise caution in: moderate to severe hepatic disease; anticoagulant therapy, because of possible increased metabolism of coumari anticoagulants; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitate patients, to avoid possible marked excitement or depression; use with alcoho or other CNS depressants, because of combined effects.
Adverse Reactions: Slight hangover, drowsiness, lethargy, headache, skin eruptions, nausea and vomiting, hypersensitivity reactions (especially in thos with asthma, urticaria, angioneurotic edema, or similar conditions).
Usual Adult Dosage: For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg.
Available as: Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 c (alcohol 7%). BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

McNEIL
McNeil Laboratories, Inc., Fort Washington, Pa. 19034

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staff, and medical research. Dr. G. V. Brindley, and Dr. John Bonnet, will represent the Scott and White group. Dr. Hebbel E. Hoff, associate dean for faculty and clinical affairs and professor and chairman of the department of physiology, and Dr. Henry D. McIntosh, chairman of the department of medicine, will represent Baylor.

Transplant reports available

Although kidney transplants are now an effective treatment for certain patients, other human organ transplantation must still be considered as experimental, according to a recent report from the American College of Surgeons/National Institutes of Health Transplant Registry.

The report is based on followup information on 12,389 kidney transplants and over 500 grafts of other organs. Results indicate that long-term kidney transplant function is the rule in most cases, and long-term survival of the recipient is to be expected. Moreover, survival with graft function has usually meant normal living, including 62 instances in which the recipient has become pregnant.

The report was carried in the Dec 3 issue of *JAMA*. Another report carried in the same issue notes that all other types of transplantation—heart, liver, lung and pancreas—have less encouraging results and must be viewed as still experimental.

Maintenance of the registries and the analysis of the data they contain are the responsibility of the American College of Surgeons under a contract with the National Institutes of Health.

The organ transplant report noted that the success of the registries is a tribute to the cooperative spirit of workers in the transplantation field, many of whom report from great distances at their own expense, and that the registries might well serve as an incentive to others to create registries for evaluating other methods of medical care.

Requests for reprints of either or both reports should be addressed to Dr. John J. Bergan, FACS, 55 E Erie St, Chicago, Ill 60611.

Sarcoma referrals requested

Cooperation of physicians is requested in referral of patients with operable bone or soft tissue sarcoma to the Surgery Branch, National Cancer Institute, to enter into a randomized study of Warfarin anticoagulation and chemotherapy as adjunctive measures to surgical treatment.

Patients must have no evidence of metastatic disease and must not have received chemotherapy, radiotherapy, or surgery to the primary except biopsy or minimal local resection.

More information may be obtained from the Admitting Office, National Cancer Institute, Clinical Center, Room 10N119, National Institutes of Health, Bethesda, Md 20014.

No polio reported in Texas in 1973

A medical milestone was reached in Texas in 1973 when no confirmed case of polio occurred, according to the Texas State Department of Health. In 1949 there were 2,400 cases; in 1950, 2,778; and in 1951, 2,060 cases in Texas.

Salk vaccine became available for general use in 1955 with the Sabin oral vaccine licensed in 1961.

In 1955 there were 13,850 paralytic cases in the United States; 816 in Texas. By 1961 this figure was reduced to 829 in the nation and 37 cases in Texas.

With the licensing of the oral vaccine the incidence of polio decreased dramatically. Mass immunization programs were initiated, school programs were started and continuing immunizations took place in physicians' offices and public health clinics. In 1971 the national total was reduced to 17 cases. Texas recorded four cases in 1971 and four in 1972.

In 1971 the Texas Legislature passed

NEWS

the compulsory school immunization law which has largely eliminated the possibility of polio in the school age group. The preschoolers are being reached through the birth certificate follow-up programs, the day care center programs, and the use of the health department's community service aides.

Hospital guide issued

The American Hospital Association recently issued its *Guide for Preparation of Constitution and Bylaws for General Hospitals.*
The guide suggests that physicians be considered, as are other community leaders, for membership on governing boards, whether or not they are members of the hospital's medical staff. It proposes that members of the governing board be limited to two terms of three years with eligibility for reelection after at least one year out of office. It suggests that medical staff members not on the governing board be permitted to serve on board committees and that the joint conference committee should be the main liaison between the governing board and the medical staff.
The guide contends that the governing board should assign reasonable authority to the medical staff for ensuring appropriate professional care and that the medical staff should conduct a continuing review and appraisal of the quality of care. According to the guide, medical staff bylaws, rules, and regulations should be recommended by the medical staff, subject to approval of the governing board.

Taxpayer's Medicaid expense

The Michigan State Comprehensive Health Planning Council's Task Force on Medicaid recently released statistical data which it had compiled concerning Medicaid programs in each state.
One basis of comparison was the measure of the burden of the program on the taxpayer during fiscal year 1970. A chart delineating the amount spent on Medicaid for each inhabitant of a state listed Texas' expenditure to be $11.95. This is not the amount paid for services for each recipient, but rather each inhabitant's share of the cost of the Medicaid program. The expenditure figures ranged from $4.25 in Mississippi to $66.05 in New York.

Accounts management courses scheduled by UT

Accounts management seminars have been scheduled in more than 14 Texas cities in 1974 by The University of Texas Division of Extension.
These seminars include a nine-hour course called Medical-Dental-Hospital Accounts Management designed especially for the health care areas by William J. Strickler, credit management training specialist with UT's Industrial and Business Training Bureau. Strickler developed the medical-dental-hospital course in 1971 in response to what he recognized as a special need in credit management in a particularly sensitive area.
Openings are available for the medical-dental-hospital accounts course or the accounts management course for business. Prospective sponsors or sponsoring organizations can receive information on available dates and obligations required of the sponsor by contacting William J. Strickler, training specialist, Industrial and Business Training Bureau, University of Texas at Austin, Austin, Tex 78712.

"My nurses tell me you're one of the ten best dressed women."

JCAH revises policies

In a major decision concerning hospital governing body and medical staff relationships, the Board of Commissioners of the Joint Commission on Accreditation of Hospitals (JCAH) approved and adopted additional interpretive language for its standards governing those relations.

The additions will be made to the governing body and management and medical staff sections of the *Accreditation Manual for Hospitals.* They state that physicians and dentists employed by the hospital in a purely administrative capacity with no clinical duties are subject to the regular personnel policies of the hospital and need not be members of the medical staff. Those physicians and dentists whose duties are medico-administrative and include clinical responsibilities must be members of the medical staff.

Termination of employment of a physician or dentist in a medico-administrative position shall be subject to review by a joint conference of hospital governing board representatives elected by the medical staff as a whole. When the action involves the individual's medical competence, the medical staff shall provide for a review of the decision, including the right to hearing if requested by the individual. If the reason for the action is purely administrative, the governing board shall follow its usual personnel policies.

These provisions will be added at the conclusion of the interpretation of Standard 8 of the governing body and management section. The same basic additions will be made at the medical staff selection portion of the interpretation of Standard 3.

18 residencies approved for family practice

Eighteen new family practice residencies were approved by the Residency Review Committee for Family Practice in December, bringing the total of approved family practice training programs to 191.

Approval of these new residencies provide 243 additional slots for training future family doctors. Eighty-one are first-year openings, a significant figure because the American Academy of Family Physicians' Congress of Delegates recently set a goal of 3,600 first-year slots by 1977—enough to accommodate 25 percent of each year's total medical graduates.

Index available

The 1973 Index for volume 69 of *Texas Medicine* is available to interested parties. Copies may be obtained by contacting the *Texas Medicine* office, 1801 N Lamar Blvd, Austin, Tex 78701.

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment media	Original price 9-30-68	Net asset value per share 12-31-73	Net asset value per share 12-31-73[1]
Mercantile National Bank Stock Fund	$10.25	$ 9.87	$ 9.87
Loomis-Sayles Capital Development Fund	14.20	12.69	12.85
T. Rowe Price Growth Stock Fund[2]	25.93	11.91	12.08
Loomis-Sayles Mutual Fund	16.82	14.20	14.53
Stein Roe & Farnham Balanced Fund	23.34	19.95	20.30
Mercantile Bank Fixed Income Fund	10.00	11.64	11.64

[1]Adjusted to include dividends and distributions since 9-30-68.
[2]Stock split two for one, May, 1973.

CAPITAL COMMENTS

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

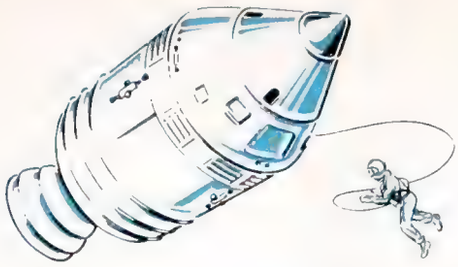
WASHINGTON: In spite of AMA objections that the program imposes controls on physicians while other professionals are decontrolled, the Economic Stabilization Program Cost of Living Council issued its Phase IV regulations Jan 18. The final regulations are similar to those proposed last Nov 6. A summary of such regulations relating to medical practitioners are as follows: (1) Limit of 4% on aggregate weighted price increases on an annualized basis (weighting based on last year's volume of revenues for each procedure or group of procedures). (2) Limit of 10% annual price increases for each specific service over $10; limit of $1 annual increase for each service under $10. (3) Price increase entitlement may be accumulated from year to year. (4) No cost justification required for price increase. (5) No automatic cost pass-throughs other than for increases in the cost of gold and silver. (6) Schedule of prices must be available upon request, with notice of availability *posted*.

There are *exceptions* for practitioners as follows: (1) may provide for revenue margin relief if (a) practitioner's base period is not substantially representative of current practice; (b) there is a significant increase in the amount of medical care delivered. (2) May provide for price increase relief if (a) prices lawfully in effect prior to the regulations are not substantially representative of current practice; (b) there is a significant imbalance between the costs and a price charged for a specific service; (c) there is a move to an underserved area; (d) there are government mandated cost increases; (e) there are cost increases related to substantial and significant improvements in the quality of care; (f) current operating revenues are inadequate to meet current operating expenses; (g) there is significant change in amount of "bad debts"; (h) there are substantial increases to low wage employees.

There were some improvements over Phase II and III for doctors. (1) The aggregate weighted fee increase has been made easier to calculate and comply with as (a) procedures may be grouped; (b) weighted based on *last year's* ratio of income from procedures. (2) 10% limit on each procedure prevents one type of patient from being subjected to large disproportionate increases. (3) removal of cost justification requirements simplifies accounting and record keeping.

AUSTIN: The Legislature acting as a Constitutional Convention is in the process of reviewing various proposals for ultimate submission to the people of Texas as to constitutional revision. Article XVI, Section 31, of the Texas Constitution which relates to medical practitioners (see *Texas Medicine*, November and December issues) has been referred to the Committee on General Provisions. This is a 21-member committee as follows: R. A. (Bob) Gammage, chairman, Harris County; Hilary Doran, vice chairman, Val Verde County; Jim Clark, Harris County; Lloyd Doggett, Travis County; Jimmie C. Edwards, Montgomery County; Gene Green, Harris County; D. Roy Harrington, Jefferson County; Joe A. Hubenak, Fort Bend County; A. J. Korioth, Dallas County; Glenn Kothmann, Bexar County; Gib Lewis, Tarrant County; Frank Lombardino, Bexar County; Raul L. Longoria, Hidalgo County; Bill Moore, Brazos County; Dick Reynolds, Dallas County; Joe Sage, Bexar County; Henry Sanchez, Cameron County; Leroy Wieting, San Patricio County; Lindon Williams, Harris County; Billie H. Williamson, Smith County; and John Wilson, Fayette County.

Continued on page 30



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

A public hearing was held on Jan 25, at which time Dr. Cliff Burross of Wichita Falls and Ace Pickens, assistant general counsel, testified on behalf of TMA in favor of retention of this section in the Constitution.

WASHINGTON: The most far reaching legislation adopted in the first session of the 93rd Congress was S 14, the Health Maintenance Organization Act of 1973, PL 93-222. The bill establishes a five year $375 million program of federal subsidies to prepaid group practice. The legislation is the product of extensive debates and study over the past several years. Accordingly, the present statute represents the adoption of a more cautious and experimental type of plan than that which was originally suggested. The law sets forth services which HMO's would be required to provide their enrollment groups, but it allows the HMO to charge co-payments in the amounts approved by the Secretary of HEW which may be required for the provisions of specific basic health service in order to control total program costs and utilization of services. All employers having 25 or more employees, and providing health insurance as an employee benefit, will be required to make HMO enrollment available where such group practice is available. This option would be an alternative to the employer's conventional medical insurance, but the employer's rate of contribution for HMO coverage would not be required to exceed his present rate. It should further be noted that the law calls for the preemption of certain state laws dealing with the corporate structure of prepaid group practice. It would, among other things, exempt HMO's from having to meet requirements applicable to insurers of health care services such as requirements setting capitalization and the establishment of financial reserves against insolvency. HMO's would also be allowed to advertise their services, charge other non-professional aspects of operation not withstanding existing state law.

AUSTIN: In response to comments requested by HEW in the *Federal Register* relating to PSRO designation, Gov Dolph Briscoe wrote in his letter of protest as to the PSRO designations, "I believe a single PSRO in Texas would be in the best interest of both the Department of Health, Education and Welfare and the citizens of Texas and I hope you respond favorably to our proposal."

WASHINGTON: According to a study made by poll taker Lou Harris for the Senate Sub-Committee on Intragovernmental Relations, Americans consider inflation and lack of integrity in government as their biggest problems. Only 3% of the persons questioned named health care as one of the most serious problems faced by the nation.

WASHINGTON: The week of Dec 21, 1973, the Senate Health Sub-Committee conducted two days of hearings to review major issues regarding the manufacture and use of drugs. Appearing on behalf of the American Medical Association was Dr. James H. Sammons, chairman of the Board of Trustees. C. Joseph Stetler, president of the Pharmaceutical Manufacturers Association of America warned that "promises of cheaper drugs through generic prescribing were unfounded and that the equivalency of drug products of the same generic composition have not been proved."

WASHINGTON: An early order of business when Congress returned to work on Jan 18, was pension reform legislation that includes liberalization of the Keogh Plan for physicians and other self-employed persons and changes in tax treatment of professional service corporations. The Senate-passed measure is before the House Ways and Means Committee and the House Education and Labor Committee.

Banana-Flavored Donnagel-PG®

The civilized solution to the age-old problem of diarrhea.

The evolution of Donnagel® PG:

Kaolin and pectin to provide demulcent-detoxicant effects.

Belladonna alkaloids for antispasmodic benefits.

Powdered opium, the therapeutic equivalent of paregoric—without the unpleasant taste—to promote the production of formed stools and lessen the urge.

And a delicious banana flavor good enough for the most discriminating tastes.

All together in the evolutionary discovery that's the best-tasting way yet to treat acute, non-specific diarrheas.

Donnagel®-PG

Donnagel with paregoric equivalent.
Each 30cc. contains:

Kaolin	6.0 g.
Pectin	142.8 mg.
Hyoscyamine sulfate	0.1037 mg.
Atropine sulfate	0.0194 mg.
Hyoscine hydrobromide	0.0065 mg.
Powdered opium, USP (equivalent to paregoric 6 ml.) (warning: may be habit forming)	24.0 mg.
Sodium benzoate (preservative)	60.0 mg.
Alcohol, 5%	

℞ Available on oral prescription or without prescription in compliance with applicable state and local law.

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Chimp courtesy of Ringling Brothers & Barnum & Bailey Combined Shows, Inc

A. H. Robins Company, Richmond, Virginia 23220

IN
WINTER
COUGHS
2102
Robitussin
Cough Calmers
Robitussin A-C

CLEAR THE TRACT WITH THE ROBITUSSIN® LINE

The coughing season is here again. Time to rely on the four Robitussins and Cough Calmers to help clear the lower respiratory tract. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For coughs of colds and "flu"

ROBITUSSIN®

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100 mg.
Alcohol, 3.5%

For unproductive allergic coughs

ROBITUSSIN A-C® ℞

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100 mg.
Codeine phosphate ..... 10.0 mg.
(warning: may be habit forming)
Alcohol, 3.5%

Non-narcotic for 6-8 hr. cough control

ROBITUSSIN-DM®

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100 mg.
Dextromethorphan hydrobromide ..... 15 mg.
Alcohol, 1.4%

Robitussin-DM in solid form for "coughs on the go"

COUGH CALMERS®

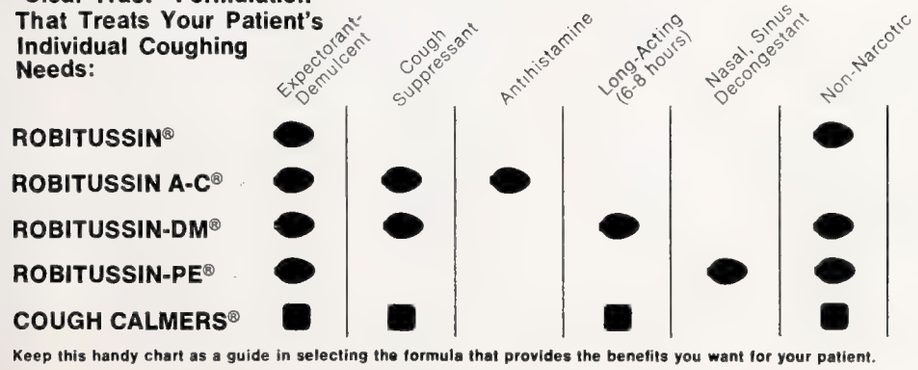
Each Cough Calmer contains:
Glyceryl guaiacolate ..... 50 mg.
Dextromethorphan hydrobromide ..... 7.5 mg.

Relieves cough, clears sinuses and nasal passages—keeps them "drip-dry" but not bone dry

ROBITUSSIN-PE®

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100 mg.
Phenylephrine hydrochloride ..... 10 mg.
Alcohol, 1.4%

Select the Robitussin® "Clear-Tract" Formulation That Treats Your Patient's Individual Coughing Needs:



Keep this handy chart as a guide in selecting the formula that provides the benefits you want for your patient.

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INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS

The 38th International Medical Assembly of Southwest Texas will meet at the El Tropicano Motor Hotel in San Antonio Feb 28-Mar 1. Nine scheduled speakers will lecture on the latest developments and advancements in their specialty, and exhibitors will display the newest equipment and drugs available. At the conclusion of the convention, the annual extension trip will be to Guadalajara and Puerto Vallarta, Mexico.

Contact: Mr. S. E. Cockrell, Jr, 202 W French Pl, San Antonio 78212, Exec Dir.

TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS

The Texas Association of Obstetricians and Gynecologists will meet Mar 8-9 at the Galvez Hotel, Galveston. Guest speakers are Dr. Robert Kistner, Harvard Medical School, who will speak on the subject, "Oligo Amenorrhea;" and Dr. Isador E. Dyer, Tulane University Medical School, who will speak on "Hysterectomy as a Sterilizing Procedure." Also presented during the meeting will be the Willard R. Cooke Resident's Prize Award.

Contact: Dr. D. M. Voulgaris, 2100 N Fulton, Wharton 77488.

TEXAS STATE DEPARTMENT OF HEALTH

The 24th annual Southwestern Conference on Diseases in Nature Transmissible to Man will be held in the auditorium of the State Health Department, 1100 W 49th St, Austin, Mar 7-8. The conference provides ample time for the presentation of papers, discussion of specific research problems, and exchange of information on cases of interest. The second annual J V Irons Lecture will be delivered by Dr. Robert Kokernot of Houston.

Contact: Charles E. Sweet, Dr. PH, Laboratory Services, Texas State Department of Health, 1100 W 49th St, Austin 78756, Acting Dir.

COMING MEETINGS

CURRENT MEETINGS IN TEXAS

AMERICAN ASSOCIATION OF MEDICAL CLINICS, South Central Region, will present a special Governmental Relations Institute Mar 8-9 at the Sheraton-Dallas Hotel, Dallas. The Institute, designed to familiarize practicing physicians and dentists with the legislative process, will feature a series of rotating seminars and workshops led by federal and state health experts. Focus will be placed on maximizing health care professionals' legislative input and effectiveness. Discussion will center on the shaping of legislation in its development, the role of professional staff members and the importance of enabling legislation. Contact: Dr. William W. Hoffman, PO Box 28, Dallas 75221, Prog Coord.

AMERICAN COLLEGE OF SURGEONS will provide eight postgraduate courses during its spring meeting in Houston Mar 25-28. Headquarters for the meeting will be the Albert Thomas Convention Center and the Hyatt Regency Hotel. Postgraduate courses will cover fluids and electrolytes; cardiovascular surgery; cancer; plastic surgery; shock; gastrointestinal surgery; surgery of the hand; and urologic surgery. For registration fees and information, contact: American College of Surgeons, 55 E Erie St, Chicago 60611.

TEXAS STATE BOARD OF EXAMINERS IN THE BASIC SCIENCES will hold its next examination Apr 19-20 in Galveston, Houston, and Lubbock. Applications for the April examination must be submitted by Mar 18 and all necessary information and documents required of examinees by the Board must be completed and in the applicant's file by that date. Details as to time and place may be obtained by writing to the Executive Secretary, Texas State Board of Examiners in the Basic Sciences, 1012 Sam Houston State Office Bldg, 201 E 14th St, Austin 78701.

VETERANS ADMINISTRATION HOSPITAL and Baylor College of Medicine will cosponsor "The Second Intensive Course in Neuromuscular Diseases" Mar 25-27 at the Shamrock-Hilton Hotel, Houston. There is no registration fee and the course is open to all physicians and other medical personnel. Contact: Dr. William P. Blocker, Jr, Veterans Administration Hospital, 2002 Holcombe Blvd, Houston 77031.

For other courses and symposiums, see Continuing Education Courses, pp 47-48.

NINTH DISTRICT MEDICAL SOCIETY announces its annual meeting to be held Mar 21 in Sealy, Tex. For more information, contact: Mrs. R. C. Torrence, Houston Academy of Medicine, 103 Jesse H. Jones Library Bldg, Houston 77025, Exec Dir.

TEXAS RADIOLOGICAL SOCIETY will sponsor its 61st annual meeting Mar 21-23 at the La Mansion Motor Hotel, San Antonio. Five out-of-state guest speakers and several local speakers are scheduled on the three-day program covering diagnostic, therapeutic radiology, nuclear medicine, ultrasound, and physics. A special conference on socioeconomics and ethics of radiology practice will be given for the first time and is designed especially for residents and new members. There is no registration fee for members. Fee for non-members is $25. Contact: Dr. Francis Edw O'Neill, Texas Radiological Society, 1128 Nix Professional Bldg, San Antonio 78205, Sec-treas.

CURRENT NATIONAL MEETINGS

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE will meet Feb 24-Mar 1 in San Francisco. Topics to be included in the program are mathematical and physical universe; living world; history, philosophy and sociology of science; health, behavior, and social processes; technology; education; science and social needs; and science and public policy. Contact: American Association for the Advancement of Science, Dept R, 1515 Massachusetts Ave NW, Washington, DC 20005.

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS will meet Mar 9-12 at the San Francisco Hilton, San Francisco. Subjects to be covered during the meeting include neuropathology, pediatric pathology, renal disease, comparative pathology, neoplasia tumors, vascular disease, immunopathology, cell injury, liver disease, and cardiovascular disease. A special symposium, "Neoplasia and Its Origins," will highlight the afternoon and morning sessions of the 11th and 12th. Members can pre-register prior to Feb 28 by contacting Mr. Robert Learmouth, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS' Symposium and Winter Workshop entitled "Current Trends in Health Care" will be held Mar 19-22 at the Fairmont Roosevelt Hotel, New Orleans. Topics to be covered during the workshop are records and peer review, emergency department and medical economics, and gimmicks and gadgetry in the emergency department. Educational programs will include emergency department medicine and management, law and the emergency physician, in-depth programs in emergency medicine, and one-day seminars in emergency care. Contact: Program Director, American College of Emergency Physicians, 241 E Saginaw St, East Lansing, Mich 48823.

AMERICAN COLLEGE OF HOSPITAL ADMINISTRATORS' 17th Congress on Administration will meet Feb 21-23 at the Palmer House, Chicago. Contact: Richard J. Stull, ACHA, 840 N Lake Shore Dr, Chicago 60611, Pres.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS will hold its 22nd Annual Clinical Meeting Apr 29-May 2 in Las Vegas. Highlights of the program are 50 papers on current clinical and basic investigation; President's Program, "The Conquest of Breast Cancer"; films; luncheon conferences; and round table discussions. Registration fee for nonmembers, $125. Contact: Mr. Donald F. Richardson, American College of Obstetricians and Gynecologists, One East Wacker Dr, Chicago 60601, Assoc Dir.

AMERICAN COLLEGE OF SURGEONS' Committee on Trauma is sponsoring a seminar on life saving measures for the critically injured. The course will be held Mar 27-30 in Tampa, Fla, and is designed to increase the knowledge and skills of physicians who are first confronted with such patients in rural, suburban, and urban hospitals. The curriculum will stress established methods of assessing life-threatening injuries and their treatment. Serious head, thoracic, abdominal, genitourinary and arterial injuries will also be discussed, as well as shock due to hemorrhage, and the delayed pulmonary and renal complications of trauma. Contact: Trauma Division, ACS, 55 E Erie St, Chicago 60611.

AMERICAN INDUSTRIAL HEALTH CONFERENCE, cosponsored by the Industrial Medical Association and American Association of Industrial Nurses, will meet at the Americana Hotel, Bal Harbour, Fla, Apr 28-May 2. The program will include both scientific and technical exhibits, postgraduate seminars, and workshops in selected areas of occupational medical practice. Contact: American Industrial Health Conference, 150 N Wacker Dr, Chicago 60606.

INTERNATIONAL ACADEMY OF PATHOLOGY is sponsoring its 63rd annual meeting at the San Francisco Hilton Hotel, San Francisco, Mar 12-16. Dr. Edward A. Gall, vice president and director of the Medical Center of the University of Cincinnati will deliver the annual Maude Abbott lecture. Also included will be 80 scientific papers, 6 pathology specialty conferences, 48 short courses, and the long course on the reticuloendothelial system. Contact: Dr. Leland D. Stoddard, US-Canadian Division, International Academy of Pathology, Department of Pathology, Medical College of Georgia, Augusta, Ga 30902, Sec-treas.

NATIONAL COUNCIL ON ALCOHOLISM announces the National Alcoholism Forum to be held Apr 28-May 3 at the Denver Hilton Hotel, Denver. The format of the program will provide for dissemination of information, special reports of national and international interest, setting goals for the future, special problem area workshops, discussion of current issues, and advances in the medical-scientific field. Contact: Mrs. Ann Milata, National Council on Alcoholism, Inc, 2 Park Ave, New York, NY 10016, National Alcoholism Forum Coordinator.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY sponsors its 37th Annual Meeting Mar 11-14 at the Fairmont Roosevelt Hotel, New Orleans. Subjects to be covered during the meeting are internal medicine, otolaryngology, orthopedic surgery, pediatrics, anesthesiology, neurology, dermatology, obstetrics, family practice, gastroenterology, radiology, ophthalmology, pathology, gynecology, surgery, and urology. A special symposium on trauma will be held Monday, Mar 11. The program is acceptable for 22 prescribed hours and 8 elective hours by the AAFP. Registration fee is $45. Contact: The New Orleans Graduate Medical Assembly, Rm 1538, 1430 Tulane Ave, New Orleans 70112.

SOCIETY OF NUCLEAR MEDICINE, SOUTHWEST CHAPTER, will present its 19th Annual Meeting at the Skirvin Plaza Hotel, Oklahoma City, Mar 15-17. Scientific sessions will be held Friday, Saturday and Sunday mornings. Afternoon sessions will consist of a teaching session and a technologists' session. Registration fee will cover all activities of the meeting. Medical students, physicians-in-training, and nuclear medicine technology students will be registered without charge. Contact: Dr. Thomas P. Haynie, 6723 Bertner Ave, Houston 77025, Sec-treas.

THIRD ANNUAL THYROID SYMPOSIUM, sponsored by USAF Academy Hospital, Colorado, will be conducted at the Broadmoor Hotel, Colorado Springs, May 4. The program is the third in a continuing series of symposia for the physician, emphasizing recent developments in thyroid physiology, diagnosis, and treatment. Contact: Dr. Frederick R. Gydesen, Director of Nuclear Medicine, Penrose Hospital, 2215 N Cascade Ave, Colorado Springs 80907, Symposium Dir.

Calendar of Listings

■ Denotes Texas Meetings

MARCH

AMERICAN HEART ASSOCIATION, TEXAS AFFILIATE, Quarterly Board Meeting, Austin, Mar 22-23, 1974. Dudley H. Hafner, PO Box 9928, Austin 78766, Exec Dir.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, Las Vegas, Mar 29-Apr 3, 1974. Dr. Blaise F Alfano, 675 Main St, Melrose, Mass 02176.

AMERICAN SOCIETY FOR AESTHETIC PLASTIC SURGERY, New Orleans, Mar 3-7, 1974. Dr. Simon Fredricks, 1103 Medical Towers, Houston 77025.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Los Angeles, Mar 1-8, 1974. Dr. George F Stevenson, 2100 W Harrison St, Chicago 60612, Exec Off.

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, Maui, Hawaii, Mar 24-25, 1974; San Francisco, Mar 28-29, 1974. Elaine Galasso, 1718 Gallagher Rd, Norristown, Pa 19401.

■ DALLAS SOUTHERN CLINICAL SOCIETY, Dallas, Mar 18-20, 1974. Robert L Heath, 433 Medical Arts Bldg, Dallas 75201.

■ FIFTH DISTRICT MEDICAL SOCIETY, San Antonio, Mar 1, 1974. S E Cockrell, Jr, 202 W French Pl, San Antonio 78212.

■ PRIVATE CLINICS AND HOSPITALS ASSOCIATION OF TEXAS, Houston, Mar 21-22, 1974. Mrs. Judy Nichols, PO Box 155, Stephenville, Tex, Exec Sec.

APRIL

AMERICAN ACADEMY OF FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY, Palm Beach, Fla, Apr 20-22, 1974. Dr. Carl N Patterson, 1110 W Main St, Durham, NC, Exec Off.

AMERICAN ACADEMY OF NEUROLOGY, San Francisco, Apr 22-27, 1974. Stanley A Nelson, 4005 W 65th St, Minneapolis, Minn 55435, Exec Dir.

AMERICAN ACADEMY OF PEDIATRICS, Bal Harbour, Fla, Apr 22-25, 1974. Dr. Robert G Frazier, American Academy of Pediatrics, 1801 Hinman Ave, Evanston, Ill 60204, Exec Off.

AMERICAN ASSOCIATION OF ANATOMISTS, Cleveland, Apr 1-4, 1974. Dr. John E Pauly, Dept of Anatomy, University of Arkansas Medical Center, Little Rock 72201.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Las Vegas, Apr 22-24, 1974. William T Maloney, AATS, 6 Beacon St, Suite 620, Boston 02108, Exec Sec.

AMERICAN COLLEGE OF ALLERGISTS, Paris, France, Apr 16-24, 1974. Dr. John D Gillaspie, 2141 14th St, Boulder, Colo, Sec-Treas.

■ AMERICAN COLLEGE HEALTH ASSOCIATION, Dallas, Apr 2-5, 1974. James W Dilley, 2807 Central, Evanston, Ill 60201, Exec Dir.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, Las Vegas, Apr 29, 1974. Dr. Michael Newton, One E Wacker Dr, Chicago 60601, Exec Dir.

AMERICAN COLLEGE OF PHYSICIANS, New York, Apr 1-5, 1974. Dr. Edward C Rosenow, Jr, ACP, 4200 Pine St, Philadelphia 19104, Exec VPres.

AMERICAN COLLEGE OF RADIOLOGY, New Orleans, Apr 1-5, 1974. William C Stronach, 20 N Wacker Dr, Rm 2920, Chicago 60606, Exec Dir.

INDUSTRIAL MEDICAL ASSOCIATION, Miami Beach, Apr 28-May 2, 1974. Howard N Schulz, 150 N Wacker Dr, Chicago 60606, Exec Dir.

SOUTHWESTERN SURGICAL CONGRESS, Monterey, Calif, Apr 29-May 2, 1974. Dr. Jack A Barney, 708 Physicians & Surgeons Bldg, Oklahoma City 73103, Sec-Treas.

■ TEXAS DENTAL ASSOCIATION, Dallas, Apr 28-May 1, 1974. Dr. Joe C Carrington, Jr, 4920 N Interregional Hwy, Austin 78751.

■ TEXAS UROLOGICAL SOCIETY, Fort Worth, Apr 4-6, 1974. Dr. Hugh Lamensdorf, PO Box 11340, Fort Worth 76109, Sec.

MAY

AEROSPACE MEDICAL ASSOCIATION, Washington, DC, May 6-9, 1974. Dr. Merrill H Goodwin, ASMA, Washington National Airport, Washington, DC 20001, Exec Sec.

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, TEXAS CHAPTER, Houston, May 1974. Dr. Byron N Dooley, 7711 Louis Pasteur, San Antonio 78229, Pres.

AMERICAN GASTROENTEROLOGICAL ASSOCIATION, San Francisco, May 19-25, 1974. Charles B Slack, 6900 Grove Rd, Thorofare, NJ 08086, Exec Sec.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, Galveston, May 24-26, 1974. Geraldine Midgley, PO Box 1287, Uvalde 78801, Exec Sec.

AMERICAN PSYCHIATRIC ASSOCIATION, Detroit, May 6-10, 1974. Dr. Walter E Barton, 1700 18th St, NW, Washington, DC 20009, Med Dir.

■ AMERICAN PSYCHIATRIC ASSOCIATION, TEXAS DISTRICT BRANCH, Houston, May 11, 1974. Mrs. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

AMERICAN SOCIETY OF COLON AND RECTAL SURGEONS, Washington, DC, May 22-25, 1974. Ms. Harriette Gibson, 320 W Lafayette, Detroit, Mich 48226, Admin Sec.

AMERICAN SOCIETY OF INTERNAL MEDICINE, San Francisco, May 2-5, 1974. William R Ramsey, 535 Central Tower Bldg, Third and Market Sts, San Francisco 94103, Exec Dir.

AMERICAN THORACIC SOCIETY, Cincinnati, Ohio, May 12-15, 1974. Robert G Weymueller, 1749 Broadway, New York 10019, Exec Dir.

AMERICAN UROLOGICAL ASSOCIATION, St Louis, Mo, May 19-23, 1974. Richard J Hannigan, 1120 N Charles St, Baltimore, Md 21201, Exec Off.

■ CONFERENCE OF CITY AND COUNTY HEALTH OFFICERS, Houston, May, 1974. Dr. J E Peavy, Commissioner of Health, Texas State Dept of Health, 1100 W 49th St, Austin 78756.

■ TEXAS AIR-MEDICS ASSOCIATION, Houston, May 9, 1974. Dr. C F Miller, PO Box 1338, Waco 78203, Sec-Treas.

■ TEXAS ASSOCIATION OF PHYSICIANS IN NUCLEAR MEDICINE, Houston, May, 1974. Dr. Robert W Parkey, 5323 Harry Hines, Dallas 78235, Sec.

■ TEXAS DERMATOLOGICAL SOCIETY in conjunction with Mexican Dermatological Society, Houston, May 10-12, 1974. Dr. Don W Owens, 6624 Fannin, Houston 77025, Prog Chrmn.

■ TEXAS DIABETES ASSOCIATION, Houston, May, 1974. Dr. Eric A Orzeck, 918 Medical Towers, Houston 77025.

■ TEXAS MEDICAL ASSOCIATION, Houston, May 8-12, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

■ TEXAS OPHTHALMOLOGICAL ASSOCIATION, Houston, May 9-12, 1974, and European tour, May 12-31, 1974. Dr. C A Struve, PO Box 6374, Corpus Christi 78411.

■ TEXAS ORTHOPAEDIC ASSOCIATION, Houston, May, 1974. Dr. John A Murray, 5401 Caroline, Houston 77004, Prog Chrmn.

■ TEXAS OTOLARYNGOLOGICAL ASSOCIATION, Houston, May, 1974. Dr. John W Youngblood, 505 Medical Park Tower, Austin 78705, Sec.

■ TEXAS PROCTOLOGIC SOCIETY, Houston, May 9, 1974. Dr. W Bailey, 712 N Washington, Dallas 75246.

■ TEXAS RHEUMATISM ASSOCIATION, Houston, May, 1974. Dr. J E Norris, 6448 Fannin, Houston 77025, Pres.

■ TEXAS SOCIETY OF ANESTHESIOLOGISTS, Houston, May, 1974. Dr. Cecil R Glass, 2525 Calder Ave, Beaumont 77702, Sec.

■ TEXAS SOCIETY OF ATHLETIC TEAM PHYSICIANS, Houston, May 10, 1974. Dr. Bobby L Stafford, 8 Medical Dr, Amarillo 79106, Sec.

JUNE

AMERICAN DIABETES ASSOCIATION, Atlanta, Ga, June 15-16, 1974. J Richard Connelly, American Diabetes Association, 18 E 48th St, New York 10017, Exec Dir.

AMERICAN NEUROLOGICAL ASSOCIATION, Boston, June 10-12, 1974. Dr. Samuel A Trufant, Cincinnati General Hospital, Cincinnati, Ohio 45229, Sec.

AMERICAN PHYSICAL THERAPY ASSOCIATION, Montreal, Can, June 14-22, 1974. Royce P Noland, 1156 15th St NW, Washington, DC 20005, Exec Dir.

ENDOCRINE SOCIETY, Atlanta, Ga, June 12-14, 1974. Mrs. Marcella M Branch, 1141 Classen Blvd, Suite 319, Oklahoma City 73106, Exec Sec.

■ MEDICAL LIBRARY ASSOCIATION, San Antonio, June 2-4, 1974. John S LoSasso, Medical Library Association, 919 N Michigan, Suite 3208, Chicago 60611, Exec Dir.

JULY

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Seattle, July 25-27, 1974. Mrs. Margaret H Henry, 36391 Maple Grove Rd, Willoughby Hills, Ohio 44094, Exec Sec.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, July 12-13, 1974. F C Schmidt, 1809 E 18th, Denver 80218, Exec Off.

■ TEXAS PHARMACEUTICAL ASSOCIATION, Houston, July 21-25, 1974. Luther R Parker, R Ph, PO Box 4487, Austin 78701, Exec Dir.

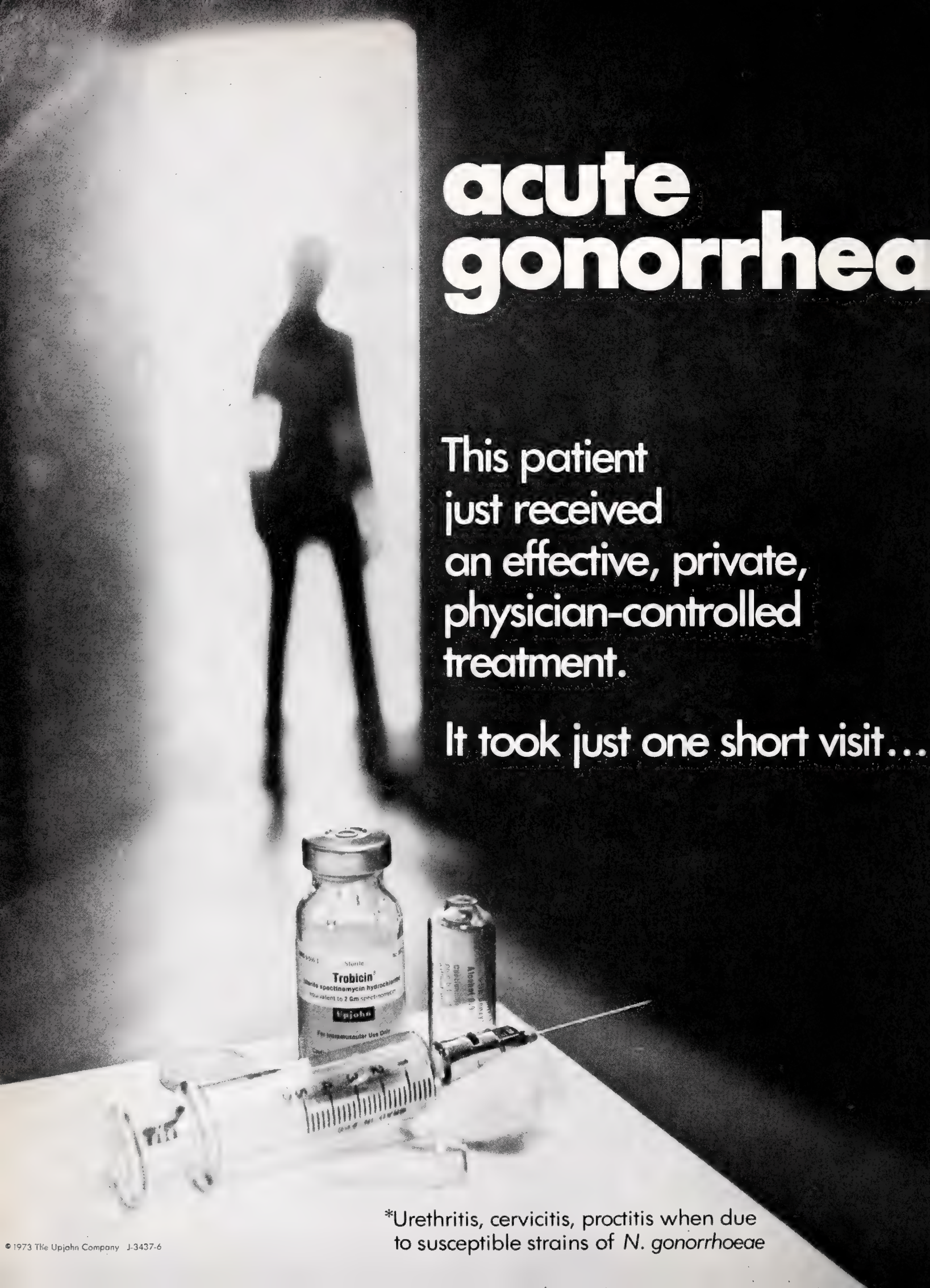
SEPTEMBER

■ AMERICAN ACADEMY OF PEDIATRICS, TEXAS CHAPTER, El Paso, Sept 20, 1974. Dr. Paul Meyer, 3121 Procter, Port Arthur, Tex 77640, Sec.

■ BLACKFORD MEMORIAL LECTURES, Denison, Sept 7, 1974. Dr. John D Gleckler, 211 N Fannin, Denison 76020, Chrmn.

■ TEXAS PEDIATRIC SOCIETY, El Paso, Sept 19-21, 1974. Mrs. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

■ TEXAS MEDICAL ASSOCIATION, Austin, Sept 20-22, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.



*Urethritis, cervicitis, proctitis when due to susceptible strains of *N. gonorrhoeae*

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Trobicin—The advantage of injectable therapy.
Once Trobicin is injected, treatment is usually complete; there can be no problems with patients sharing, skimping, skipping or forgetting medication.

Trobicin—The aspect of privacy.
There are no prescriptions to fill, no capsules to take. Neither family, friends nor co-workers need know or suspect the patient's problem.

Trobicin—Indication and dosage.
Spectinomycin is indicated only for use in acute urethritis and proctitis in the male and acute cervicitis and/or proctitis in the female when due to susceptible strains of *N. gonorrhoeae*. The usual dosage for Trobicin in adult males is 2 grams intramuscularly†; 4 grams intramuscularly in females.

Trobicin—Not effective for syphilis.
Trobicin is not effective for any stage of syphilis. Trobicin may mask or delay the symptoms of incubating syphilis. If concurrent syphilis is suspected, follow the patient serologically for at least 3 months. Patients with syphilis should receive adequate specific anti-syphilitic therapy with an appropriate antibiotic.
Trobicin is contraindicated in patients previously found hypersensitive to it.

Intramuscular

...and Trobicin® 2 gm and 4 gm vials sterile spectinomycin hydrochloride

Sterile Trobicin
Sterile Trobicin (spectinomycin hydrochloride) —For Intramuscular Injection:
2 gm vials containing 5 ml when reconstituted with diluent.
4 gm vials containing 10 ml when reconstituted with diluent.
An aminocyclitol antibiotic active *in vitro* against most strains of *Neisseria gonorrhoeae* (MIC 7.5 to 20 mcg/ml). Definitive *in vitro* studies have shown no cross resistance of *N. gonorrhoeae* between spectinomycin and penicillin.

Indications: Acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

Contraindications: Contraindicated in patients previously found hypersensitive to spectinomycin.

Warnings: Not indicated for the treatment of syphilis. Antibiotics used to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Patients should be carefully examined and monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected.
Safety for use in infants, children and pregnant women has not been established.

Precautions: The usual precautions should be observed with atopic individuals.
Clinical effectiveness should be monitored to detect evidence of development of resistance by *N. gonorrhoeae*.

Adverse reactions: The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.
During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single- and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

Dosage and administration: Keep at 25° C and use within 24 hours after reconstitution with diluent.
Male—Inject 5 ml intramuscularly for a 2 gram dose. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.
Female—Inject 10 ml intramuscularly for a 4 gram dose.

How supplied: *Vials, 2 and 4 grams—with ampoule of Bacteriostatic Water for Injection with Benzyl Alcohol 0.9% w/v.* Reconstitution yields 5 and 10 ml respectively with a concentration of 400 mg spectinomycin per ml (as the hydrochloride). For intramuscular use only.
Susceptibility Powder—for testing *in vitro* susceptibility of *N. gonorrhoeae*.
Caution: Federal law prohibits dispensing without prescription.
For additional product information see your Upjohn representative or consult the package insert.

Upjohn
MED 8-5-S (MBR-1)
The Upjohn Company, Kalamazoo, Michigan 49001

† For patients with gonorrheal proctitis and for patients in geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams is preferred.

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Rondomycin®
(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.
WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**
Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)
Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.
Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)
All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.
Tetracyclines are present in milk of lactating women taking tetracyclines.
To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.
Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal disease., when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic)
Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.
Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur
USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.
For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.
Eaton Agent pneumonia: 900 mg daily for six days.
Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.
Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided
Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.
In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.
In streptococcal infections, a therapeutic dose should be given for at least 10 days.
SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73

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When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

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*Since many strains are known to be resistant, routine sensitivity testing is recommended.

The Weight of Professional Opinion

It's time for action to defend the laws and regulations that protect your patients against drug substitution.

These professional and trade organizations are united in supporting antisubstitution statutes and regulations:

The American Academy of Dermatology

The Board of Directors of the American Academy of Family Physicians

The Executive Board of the American Academy of Neurology

The Committee on Drugs of the American Academy of Pediatrics

The American College of Allergists

The Executive Committee of the American College of Obstetricians and Gynecologists

The Board of Regents of the American College of Physicians

The Board of Trustees of the American Dental Association

The Board of Trustees of the American Medical Association

The American Psychiatric Association

The Executive Committee of the National Association of Retail Druggists

The Board of Directors of the Pharmaceutical Manufacturers Association

The National Wholesale Druggists' Association

Joint Statement on Antisubstitution Laws and Regulations

The purpose of this statement is to affirm the support of the participating organizations for the laws, regulations and professional traditions which prohibit the unauthorized substitution of drug products.

Traditionally, physicians, dentists and pharmacists have worked cooperatively to serve the best interests of patients. Productive cooperation has been achieved through mutual respect as well as a common concern for the ideals of public service. This mutual respect has been reflected, in part, by joint support over the years for the adoption and enforcement of laws and regulations specifically prohibiting unauthorized substitution and encouraging joint discussion and selection of the source of supply of drug products. The basic principles of medical, dental and pharmacy practice are thus utilized and preserved in the interest of patient welfare.

The antisubstitution laws have not obstructed enhancement of the professional status of pharmacy any more than they have in and of themselves guaranteed absolute protection from unsafe drugs, or freed physicians, dentists and pharmacists from their responsibilities to patients. As a practical matter, however, such laws and regulations encourage interprofessional communications regarding drug product selection and assure each profession the opportunity to exercise fully its expertise in drug usage, to the advantage of patients.

Physicians and dentists should be urged to increase the frequency and regularity of their contacts with pharmacists in selection of quality drug products, recognizing that economies to patients can be improved through such communication, taking into account the patients' needs. The pharmacist's knowledge of the chemical characteristics of drugs, their mode of action, toxic properties and other characteristics that assist in making drug selection decisions should be utilized to the fullest extent practicable by physicians and dentists in serving their patients.

Since drug product selection entails knowledge derived from clinical experience, the physician's and dentist's roles in product selection remain primary and do not permit delegation of decisions requiring medical and dental judgments. A broader role in therapy will evolve for pharmacists as improved understanding and cooperation among the professions continue to grow.

There has been no evidence that there are convincing reasons to modify or repeal existing laws and regulations prohibiting the unauthorized substitution of another drug product for the one specified by a prescriber. It is our belief that such laws and regulations merit the joint support of the medical, dental and pharmaceutical professions and the pharmaceutical industry.

Add your opinion to the weight of other professionals and send it to your state assemblyman or legislator.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

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Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, U.S.P., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent.

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CONTINUING EDUCATION COURSES

FEBRUARY

Cardiology: "Cardiologic Perspectives for the Internist: 1974" is the title of a course being cosponsored by Baylor College of Medicine, Houston, and the American College of Physicians. The course is scheduled for Feb 27-Mar 1, in Houston, and is designed to give the general internist and cardiologist an overview of the current management practices of patients with coronary artery disease, hypertensive vascular disease, and cardiopulmonary disease. Registration fee is $100 for members of American College of Physicians, and $150 for nonmembers. Associate fee is $50. Contact: The American College of Physicians, 4200 Pine St, Philadelphia 19104.

MARCH

Cardiology: The University of Texas Health Science Center at Houston will sponsor a clinical cardiology course Mar 20-Dec 4 in Houston. Teaching method will be lecture. For more information, contact Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025.

Disease: The physiological basis of clinical disease will be the subject of a course presented by the American College of Physicians and The University of Texas Southwestern Medical School at Dallas. It will be held at the Marriott Motor Hotel Mar 4-7, and the pathophysiology of hypertension, diabetes mellitus, pulmonary disorders, cardiovascular disease, and the disorders of the immunologic system, as well as liver diseases and gastroenterologic derangements, will be covered in the course. Member fee is $120; nonmembers, $175; and associate, $60. Contact: The American College of Physicians, 4200 Pine St, Philadelphia 19104.

Gastroenterology: The William Beaumont Gastrointestinal Symposium is being sponsored by William Beaumont Army Medical Center, El Paso, Mar 13-15, in El Paso. The course is designed for gastroenterologists and gastrointestinal surgeons, and no fee will be charged. Teaching methods will include audiovisual materials, lecture, open question, panel, and seminar. Contact: Col J Loren Pitcher, Chief, Dept of Medicine, and Chief, Gastroenterology Service, William Beaumont Army Medical Center, El Paso 79920.

Hypertension: Bexar County Medical Society and The University of Texas Health Science Center at San Antonio will present "Hypertension, 1974—New Horizons" Mar 8-9 in San Antonio. Fee: $40. Credit: 10 hours AAFP and Category I, AMA Physician's Recognition Award. Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284.

Medicine: The New Orleans Graduate Medical Assembly will sponsor its 37th Annual Meeting Mar 11-14 at the Fairmont Roosevelt Hotel, New Orleans. Subjects to be covered during the meeting are internal medicine, otolaryngology, orthopedic surgery, pediatrics, anesthesiology, neurology, dermatology, obstetrics, family practice, gastroenterology, radiology, ophthalmology, pathology, gynecology, surgery, and urology. A special symposium on trauma will be held Monday, Mar 11. The program is accredited for 22 prescribed hours and 8 elective hours by the AAFP. Registration fee is $45. Contact: The New Orleans Graduate Medical Assembly, Rm 1538, 1430 Tulane Ave, New Orleans 70112.

Medicine: The Texas Academy of Family Physicians, Permian Basin Chapter, will hold its spring seminar Mar 29-30 at Indian Mountain Lodge, Davis Mountains State Park, Fort Davis, Tex. Fee for the seminar is $25, and it is accredited for 6 prescribed hours, TAFP. Contact: Dr. Wm Bart Pate, 202 N Second St, Alpine, Tex 79830.

Neuromuscular Disease: The second intensive course in neuromuscular diseases, sponsored by the Veterans Administration and Baylor College of Medicine, Houston, will be conducted at the Shamrock-Hilton Hotel, Houston, Mar 25-27, in cooperation with the National Institutes of Health. There is no registration fee and the course is open to all physicians and other interested medical personnel. Contact: Dr. William P Blocker, Jr, Chief, Rehabilitation Medicine Service, Veterans Administration Hospital, 2002 Holcombe Blvd, Houston 77031.

Ophthalmology: The Department of Ophthalmology at The University of Texas Medical Branch in Galveston will present its Eighth Annual Postgraduate Alumni Meeting Mar 30, at the Shriners Burns Institute in Galveston. Duration is one day with 8 total course hours. Fee: $25. Contact: Dr. John H. Brennan, Dept of Ophthalmology, The University of Texas Medical Branch, Galveston 77550.

Orthopedic Surgery: A course entitled "Adult Salvage Orthopaedics" is being sponsored by the American Academy of Orthopaedic Surgeons at the Ponderosa Motor Inn, Temple, Mar 25-27. Fee is $150 for physicians and $50 for residents with letter from chief. Con-

tact: Department of Continuing Education, American Academy of Orthopaedic Surgeons, 430 N Michigan Ave, Chicago 60611.

Pathology: A program on normal and abnormal morphology and function of the reticuloendothelial system will be given at the Annual Meeting of the US-Canadian Division of the International Academy of Pathology at the San Francisco Hilton Hotel Mar 13-14. Contact: Mrs. J. Preston, IAP Registrar, Armed Forces Institute of Pathology, Washington, DC 20306.

Pathology: The Houston Society of Clinical Pathologists, in conjunction with Baylor College of Medicine, Houston, will present its 14th Annual Seminar entitled "Current Problems in Liver Disease" on Mar 30, 1974. The seminar will be held in the Main Auditorium, Baylor College of Medicine. Subjects to be discussed include viral hepatitis, hepatitis-associated antigen testing, clinical aspects and pathology of chronic active hepatitis, clinical aspects and pathology of primary biliary cirrhosis, hepatic tumors, and clinical laboratory testing in liver disease. Registration fee is $50. Contact: Dr. Jack L Titus, Baylor College of Medicine, Texas Medical Center, Houston 77025, Seminar Chairman.

Pediatrics: "Pediatric Potpourri," sponsored by The University of Texas Medical Branch at Galveston, will be held Mar 14-15 in Galveston. Registration fee is $75, and the course is accredited for 12 prescribed hours, AAFP. Contact: Dr. Lillian H Lockhart, Associate Professor, Dept of Pediatrics, UT Medical Branch, Galveston 77550.

Plastic Surgery: The Educational Foundation of the American Society of Plastic and Reconstructive Surgeons will sponsor a course, "Plastic Surgery of the Orbital Region," at the Fairmont Hotel, Dallas, Mar 18-20. The course is designed for plastic surgeons and no fee will be charged. Contact: Carl J. Olson, EdD, Coordinator of Education, American Society of Plastic and Reconstructive Surgeons, 19 E Madison, Suite 807, Chicago 60602.

Radiology: The University of Texas Health Science Center at San Antonio will present "Current Trends in Radiology" Mar 16 at The University of Texas Medical School in San Antonio. Fee for the course is $40, and it is accredited for 7 hours AAFP and Category I, AMA Physician's Recognition Award. Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284.

Respiratory Care: "Respiratory Care in Shock Syndromes" is designed for physicians with a special interest in the treatment of respiratory distress. The course is sponsored by the American College of Chest Physicians and the University of Hawaii School of Medicine and is to be held Mar 4-6 at the Hilton Hawaiian Village Hotel, Honolulu. The program will summarize the latest developments in the area of respiratory care following shock and other injuries. Featured will be a session on underwater pulmonary barotrauma and the effects of injuries caused by marine life. Registration fee: ACCP members $125; nonmembers $150; residents, nurses and therapists $75. Contact: Bradford W. Claxton, MEd, Director of Continuing Education, American College of Chest Physicians, 112 E Chestnut St, Chicago 60611.

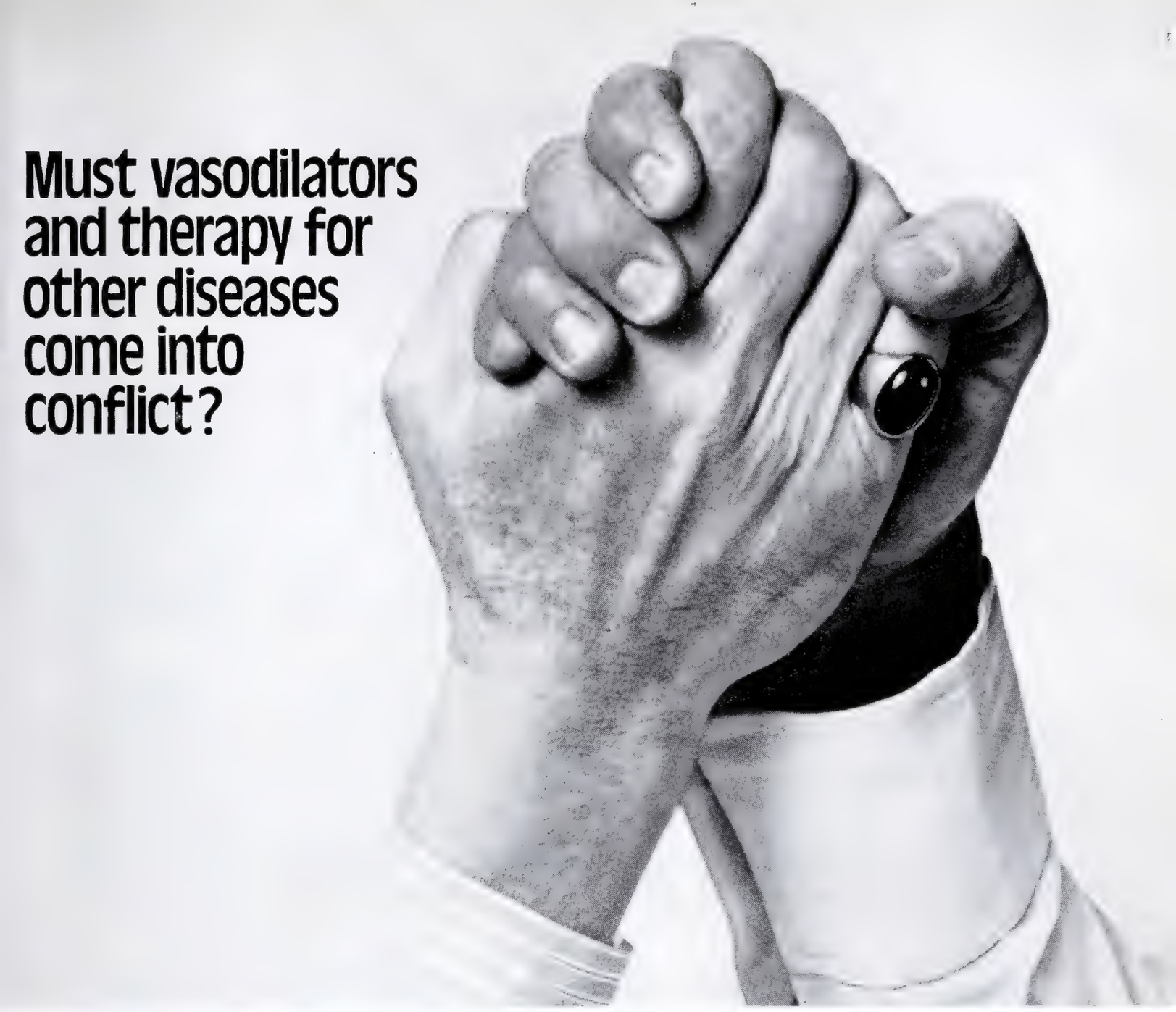
Surgery: The American College of Surgeons will hold its second annual spring meeting in Houston Mar 25-28 at the Albert Thomas Convention Center and Hyatt Regency Hotel. Postgraduate courses will cover fluids and electrolytes, cardiovascular surgery, cancer, plastic surgery, shock, gastrointestinal surgery, surgery of the hand, and urologic surgery. The courses are accredited for Category I, AMA Physician's Recognition Award, and fee is $40. Contact: American College of Surgeons, 55 E Erie St, Chicago 60611.

APRIL

Anesthesiology: "Clinical Anesthesiology for General Practitioners" will include demonstrations and discussions on airway management, resuscitation and tracheal intubation, intravenous supplements to general anesthesia, management of problems in clinical anesthesia, practical nerve block and toxicity of local anesthetic agents, and preoperative and postoperative management of anesthetic complications. The course is sponsored by the University of Oklahoma Health Sciences Center and will be held Apr 22-26 in Oklahoma City. Contact: Office of Continuing Medical Education for Physicians, University of Oklahoma Health Sciences Center, PO Box 26901, Oklahoma City 73190.

Arthritis: The 10th Annual Orthopedic Symposium of St Luke's Episcopal Hospital and Baylor College of Medicine, Houston, presents "Surgical Treatment of Arthritis" Apr 25-27 at the Warwick Hotel, Houston. Faculty will include Dr. Mack L. Clayton, Denver; Dr. William R. Murray, San Francisco; Dr. Lowell F. A. Peterson, Rochester, Minn; Dr. Kauko Vainio, Heinola, Finland; and Dr. Martin Lidsky, Houston. Registration fee: $100 ($50 for residents with letter from chief). Contact: Dr. Sherwin Siff, 208 Hermann Professional Bldg, Houston 77025.

Must vasodilators and therapy for other diseases come into conflict?



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the compatible vasodilator... no treatment conflicts reported

The cerebral or peripheral vascular disease patient often has coexisting disease[1] which calls for another drug along with his vasodilator. It may be a hypoglycemic, miotic, antihypertensive, diuretic, anticoagulant, corticosteroid, or coronary vasodilator.

Vasodilan is not incompatible with any of these drugs—no treatment conflict has been reported. And, unlike other vasodilators, Vasodilan has not been reported to affect carbohydrate metabolism, liver function, or intraocular pressure—or to complicate treatment of diabetes, hypertension, peptic ulcer, glaucoma, or liver disease.

In fact, there are no known contraindications to the use of Vasodilan in recommended oral doses, other than that it should not be given in the presence of frank arterial bleeding or immediately postpartum.

1. Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500 and Unit Dose.

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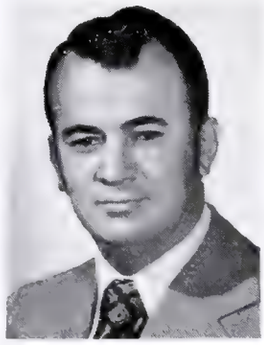
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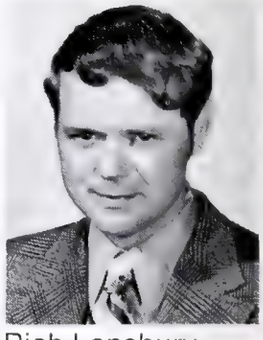
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Warnings: Use with caution in those patients with history of peptic ulcer, severe diabetes, impaired gall bladder or liver functions and in pregnant women.
Adverse Reactions: Patients should be informed of the short-lived reactions experienced with nicotinic acid therapy: cutaneous flushing, a sensation of warmth, tingling and itching of the skin, increased gastrointestinal motility and sebaceous gland activity.
Dosage and Administration: One capsule every 12 hours or as directed by physician.
Caution: Federal law prohibits dispensing without prescription.
How Supplied. Bottles of 100 capsules.

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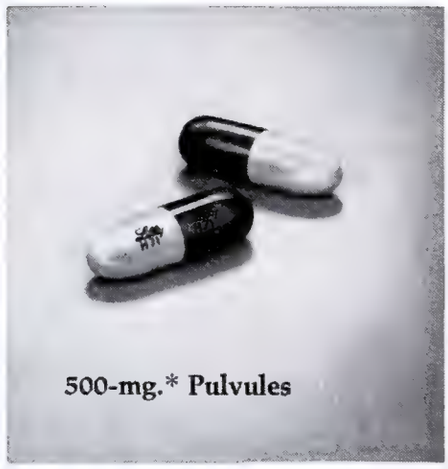

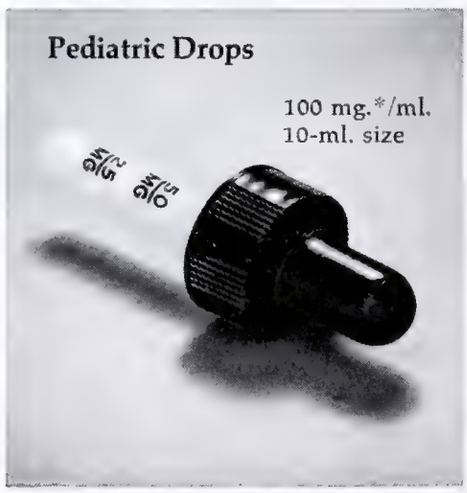

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Masked epilepsy: a current perspective

Charles M. Bradshaw, MD

An extensive review of existing literature is combined with personal experience to provide general information on masked epilepsy. The author suggests that it is not an uncommon entity. When an individual has apparently functional symptoms which are of sudden onset, brief duration, and episodic nature, one should consider masked epilepsy in many instances. Some clinical and electroencephalographic findings which help identify this treatable subclinical process are discussed.

Epilepsy may be broadly defined as an alteration of brain function produced by recurrent or paroxysmal abnormal electrical discharges; such neuronal discharges result in impairment of normal consciousness with or without convulsive movements. This concept encompasses the classical grand mal, jacksonian (focal motor), petit mal (akinetic, myoclonic), and psychomotor seizures as well as those states called subclinical or masked epilepsy. What is masked epilepsy? Numerous episodic symptoms without motor accompaniments such as headache, visceral sensations, memory defects, and behavior disorders have long been associated with abnormal electroencephalographic findings and are described by early workers such as Gibbs, Penfield, Jasper, Walter, and Lennox among others.[1-7] Although the individuals having these symptoms and electroencephalographic (EEG) findings could not be diagnosed clinically as being epileptic, most became asymptomatic when taking anticonvulsant medication. The subclinical epileptic process may be manifest by any one of a number of nonspecific symptoms, hence defying description in nonvarying scientific terms and adding confusion and controversy to this concept. I think that case reports would add only a little to existing information; however, such personal experience and a survey of the literature lead me to conclude that the incidence of masked epilepsy is greater than is ordinarily appreciated. Persons having masked epilepsy often endure needless loss of time, money, health, and personal dignity for want of treatment.

Purpose

My purpose is to make practitioners aware of these treatable conditions. While some discussion is given to the existing controversy in this area, the focus is on subclinical epilepsy with information having reasonable practical value. Some lay publications are acquainting the public with this area of concern.[2]

Methods

By combining personal experience and reviewing existing literature on masked epilepsy, I propose to find factors limiting effective diagnosis and treatment, EEG correlation with clinical observations, and significant conclusions that can be drawn from this study.

Discussion of Results

Several factors were discovered which contribute to the "subclinical" label of this entity. One of the greatest drawbacks is simply lack of information. There is little material in current literature.[28] Some texts on clinical EEG present a myopic view, if not inattention, to what actually exists in clinical practice.[8,9] Increasing subspecialization in medicine sometimes narrows those parameters which an individual seeks to consider. Technical limitations are those inherent in EEG recording and interpretation. A satisfactory recording and reporting

are contingent on adequate facilities, equipment, and technical ability. While individuals who are known to have seizures may have repeatedly normal tracings, the EEG can and does offer documentation of abnormal patterns in most instances. The error of omission in masked epilepsy is the failure to obtain sleep recordings, which uncover a minimum 50% higher yield of abnormal patterns. Those EEG patterns most commonly associated with the manifestations of subclinical epilepsy at this and other institutions include: 14 and 6/second positive spikes,[1,2,10,11] anterior temporal spiking (temporal lobe or psychomotor seizure types,[1,12,13] petit mal,[14,16] small sharp spikes,[17,18] mid-temporal spikes,[1,2] frontal spikes,[2] and petit mal status in adults.[19,20] For statistical data on specific symptom findings including large case series contrasting epileptics, suspected epileptics and normals, *Gibbs Atlas of Electroencephalography,* vol III,[2] is excellent. In both clinical practice and in surveying the literature, I have been impressed by the frequency of epileptic phenomena, and feel that patients having manifestations of masked epilepsy are best divided into three groups for clinical consideration:

1. Those who enjoy good physical and mental health except for brief, episodic, extreme anxiety states; suicidal impulses; hallucinatory experiences; or other states of altered perception which occur as a relatively singular phenomenon.

2. Persons who have a discrete major or minor psychiatric illness but who also have the episodic symptoms seen in groups 1 and 3. The latter symptoms do not respond to, and indeed are often exacerbated by, psychiatric treatment modalities.

3. Those having a known motor seizure disorder and "minor seizures" consisting of relatively vague or nonspecific symptoms usually of autonomic, sensory (including special sense perception), or behavioral nature.

Patten had a series of 20 cases having grand mal and temporal lobe minor seizures. The minor seizures were apparently precipitated (or at least not helped) by Dilantin; and changing to Mysoline eliminated most of the minor seizures and improved control of the grand mal seizures. Follow-up exceeds one year.[21]

Behavioral accompaniments seen in individuals with motor epilepsy, as in group 3, have been considered by some authors to be a separate psychologic entity,[1,2,6,8,9] or, what is more unfortunate, to be symptoms of a secondary emotional reaction representing a poor adjustment to being epileptic.[36] My experience suggests that motor and emotional phenomena often share the same cerebral alteration as an etiologic basis. Accumulating evidence suggests that limbic system structures may be a determining factor in the clinical forms of some "masked" seizure phenomena.

Gibbs and Gibbs, early in the history of electroencephalography, made the supposition that lesser cerebral alterations than that required to show EEG abnormalities might result in clinical symptomatology. More recently, Jonas and Turner have described "epileptic" equivalents which include a broad range of symptoms: fear and anxiety, tension states, and mood alteration which are out of proportion to the life situation; sensory, autonomic, and visceral disturbances; behavioral abnormalities; and, lapses, absent-mindedness, and forgetfulness.[22-25,28,29,32] Those reports and others further suggest that the use of tranquilizers, in general, worsens these disorders. (This may be at least a partial explanation of the unquestionably increasing numbers of patients with epileptic phenomena in the medical population.[14-16,33,35] While there is no controversy with the basic theory of epileptic equivalents, I do not approve of substituting evangelistic use of anti-epileptic medication as a psychotropic drug to treat a broad range of psychiatric entities for reliance on clinical judgment in treating any epileptic phenomenon.[10-12,29-31,36]

Summary and Conclusions

A closer look at masked epilepsy can reveal aspects of the entity which lessen its sub-

clinical classification. Greater clinical acumen likely will confirm an opinion of increased incidence of epileptic phenomena in clinical practice.

This article does present a *subclinical* entity, and in no way advocates the treating of EEG patterns rather than patients. It does encourage physicians to recognize abnormal EEG patterns as being significant, and possibly indicators of a condition which can become symptomatic. Also, antiepileptic medications are not without toxic side effects and should be regarded as drugs having relatively specific indications for their use.

Finally psychiatric diagnosis is too often made by exclusion in medical practice. When one sees "functional" symptoms similar to those described herein; and when the condition may be said to be of abrupt onset, brief duration, and episodic nature; then one should consider masked epilepsy in many instances. Adequate history and clinical judgment dictate appropriate use of antiepileptic medication. Fortunately, treatment can benefit most persons having this entity while its intriguing complexity continues to be explored.

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Surgery for the patient with rheumatoid arthritis

Paul R. Lipscomb, MD

Although diseased synovium is responsible for joint and tendon destruction in rheumatoid arthritis, no sure way to prevent such destruction by surgery has been devised. Synovectomy does have a place in slowing the disease process when it does not respond to nonoperative therapy in some of the larger joints. Arthroplasty, in the form of joint replacement by prosthetic devices, can restore joint function and painless ambulation for selected patients. Arthroplasty for severely destroyed metacarpophalangeal joints of the hand and fixation of the other small joints in the position of function can materially improve the action of the hand. Resection of portions of destroyed and deformed joints, particularly the metatarsophalangeal joints of the feet, can materially lessen pain in the feet. Arthrodesis of other destroyed joints, particularly the ankle and tarsal joints, is still the best way to relieve pain caused by destruction of these joints. Other procedures that are sometimes indicated include release of contractures, replacement of displaced tendons, repair of ruptured tendons, and decompression of nerves and tendons. All physicians must realize that children with rheumatoid arthritis, even when only one joint is involved, must be carefully screened for concomitant eye disease that can lead to blindness.

Each patient with rheumatoid arthritis presents a different problem. The villain that produces destruction of articular cartilage, capsules of joints, ligaments, and tendons, is the diseased synovium.[12] The synovium of tendon sheaths (tenosynovium) as well as the synovium of joints is often involved. This important fact has been overlooked too frequently; extensive surgical procedures have been performed on the small joints of the hand but no attempt was made to eradicate the disease from the synovial sheaths.

We have attempted to compare the results from surgery for rheumatoid arthritis to surgery for conditions caused by trauma; the two are not analogous.[8] Likewise, the results of surgery in children seldom can be compared with the results in adults. Few surgeons have had enough experience with surgery for rheumatoid arthritis in children to have valid opinions.

Rheumatoid arthritis may take one of three basic courses.[11] The first is characterized by an initial period of activity which is followed by a prolonged and continuous remission. The second is characterized by a cyclic course, and the third by continuous and unremitting activity of the disease. Fully two-thirds of all patients with rheumatoid arthritis respond to nonsurgical measures and thus are never candidates for consideration of surgical procedures.

Motivation of the patient can spell the difference between success or failure of a given surgical procedure. Many with rheumatoid arthritis are passive, dependent individuals. Extensive surgical procedures performed on such patients are apt to produce unsatisfactory results.

Because of many variables, the ultimate judgment of the success of a surgical procedure often depends more on the patient's estimation of the benefits derived than upon detailed studies of ranges of motion and other parameters.

Synovectomy

Synovectomy of one or a few joints in a patient with generalized disease may remove only a small amount of involved synovium. Especially is this the case in the hand. Occasionally a patient will have involvement of only one, two, or three joints. Synovectomy for these is apt to be successful. The results from synovectomy on the larger joints such as the knee, elbow, and wrist seem to be materially better than those on the small joints of the hand.[6]

Arrestive, so-called prophylactic synovectomy on multiple joints of the hand, un-

fortunately has not produced the results that were anticipated.[7] We now know that when synovectomy is limited to the small joints of the hand, we cannot predict with any degree of certainty that the disease is going to be arrested in those joints. These joints, when involved by rheumatoid disease, are suspended in too much synovial fluid; this, together with the hypertrophied synovium, causes damage; capsules and ligaments are stretched and cartilage is eroded. However, as soon as we remove the synovium and synovial fluid, adhesions occur, not only in the operated joint but oftentimes in adjacent ones. The surgically treated hand then seems to have more stiffness after an arrestive synovectomy than was present originally. Although the patient may state that discomfort in the hand is less after an arrestive synovectomy, he usually decides not to have the procedure performed on his other hand, even though surgery was originally planned for both. However, when I do reconstructive surgery for one hand on those patients who have developed marked deformity, even though late in their disease, they usually return to have the second operation. This criteria appears to be a good test of the efficacy of an operation.

I have become convinced that if synovectomies or extensive reconstructive surgical procedures are to be done on multiple joints of the hand, they should be performed at one sitting so that there will be only one period of immobilization and one period of postoperative edema rather than several. I believe that much more stiffness results after two or three periods of postoperative edema and immobilization than after one. Based on this reasoning, the technique of synovectomy by dislocation of the small joints was developed.[7] Using this technique, operating and tourniquet time is materially less. In an attempt to lessen the stiffness that results from dislocation of the joints, a few drops of steroid solution are injected just prior to closure and the immobilizing Kirchner wires are removed after a few days and motion is begun.

Chemical Synovectomy

Unfortunately, injection therapy with thio-TEPA or nitrogen mustard did not produce the long-term desirable effects that had been hoped for. These agents do help some patients for short periods of time, but never, to my knowledge, have they accomplished chemical synovectomy. In reality, the benefits have been no better than, if as good as, those produced by injections of cortical steroids. Therefore, injection of thio-TEPA, nitrogen mustard, and osmic acid have not gained popular acceptance.

Tenosynovectomy

Tenosynovitis of the flexor sheaths of the hand is much more common than realized. Although ruptures of extensor tendons at the level of the wrist are relatively common, rupture of tendons in the hand itself is uncommon. When tenosynovitis at the level of the proximal pulley of the digital sheaths in the palm produces a catching, snapping, or a locking condition resulting in the so-called trigger finger, surgical incision or excision of the pulley is indicated. It usually is advisable to excise as much of the thickened nodulous synovium at this level as is possible without resorting to extensive resection.[5]

Arthroplasty

When severe destruction of joints has occurred, it often is advisable to do an arthroplasty. For the larger joints, particularly the hip and the knee, total joint replacement appears to provide the means to restore many patients to a comfortable, ambulatory existence.[1-3,16] Various kinds of replacements for the elbow, shoulder, and ankle are being tried by numerous investi-

gators, but none have stood the test of time.

Vitallium mold arthroplasties, for patients whose hips have been destroyed by rheumatoid arthritis, have been discarded except for adolescents and young adults.

Should arthroplasties of the metacarpophalangeal joints be of the conventional type popula.:zed by Fowler,[10] Vainio,[15] and Tupper,[14] or should they be done using an interposition flexible implant? This question has not been resolved. A decade ago, many thought that the metal hinge implant, developed by Brannon and refined by Flatt,[4] would be the answer. During the last five years, silicone rubber flexible implants have been advocated by Niebauer[9] and by Swanson.[13] Controversy exists concerning the advantages and disadvantages of having the implant fixed to bone or having it move in its bed as does a piston. The Niebauer flexible implant, which is covered by a Dacron sleeve, becomes fixed as fibrous tissue invades the interstices of the Dacron mesh. The Swanson implant, which becomes encapsulated but not fixed, moves proximally and distally in each of the bones which it bridges. The rationale of having the implant fixed in bone is more appealing to me than that of intramedullary gliding. The principle of firm fixation of the components used for total joint replacement by methyl methycrylate seems to be established for the larger joints. Can a diametrically opposite rationale be defended for the smaller joints of the hand?

A consensus as to the best type of arthroplasty has not been reached. My results using a conventional arthroplasty for the metacarpophalangeal joints have been just as good as or better than those entailing a flexible implant. The uninitiated and inexperienced hand surgeon may find it easier to position the digit on the end of the metacarpal and to maintain this position by the use of an implant. The hinge of the Niebauer prosthesis is not as thick and thus is more flexible than the Swanson prosthesis. Once the hinge is encapsulated by fibrous tissue, I suspect that it makes little difference in the overall results if the thin hinge of the Niebauer prosthesis eventually breaks.

When the first metacarpotrapezial joint of the thumb is destroyed and unstable, excision of the trapezium allows the surgeon to reposition the thumb, overcome mild adduction contractures, and at the same time, preserve some motion at the base of the thumb. Such motion is particularly desirable when it is necessary to perform arthrodesis on both the interphalangeal and the metacarpophalangeal joints of the thumb. After the trapezium is excised, it is important to position the first metacarpal carefully and pin it to the distal articular surface of the navicular bone with two or more Kirchner wires. The wrist is splinted in a position of function, and such position maintained until the Kirchner wires are removed three to six weeks later. I have had no personal experience with the use of the silicone rubber implant advocated by Swanson, but have been so gratified with the degree of motion, freedom from pain, and stability that has ensued after using the technique described that I see no need at the present time to alter this.

Arthrodesis and Ankylosis

Arthrodesis of the ankle and occasionally the knee is advisable for certain patients who have severe deformity and pain. At the present time, arthrodesis of the latter joint is reserved for those patients who have severe ligamentous instability, destruction of bone, or who have had infection.

When destruction or instability of interphalangeal joints is present, no procedure short of arthrodesis is likely to furnish a satisfactory permanent result, and I cannot now advocate the use of prosthetic replacements. Should they stand the test of time, I will be willing to give them a trial.

Frequently, after arthroplasty of the metacarpophalangeal joints of the fingers, I will, by manipulation, overcome fixed contractures and deformities of the interphalangeal joints and fix them in the position of function using crossed Kirchner wires. Depending upon the amount of joint destruction, the type and stage of arthritis which is present, and the status of the gliding mechanism of the tendons, the final function of the interphalangeal joints is determined. If I think there is a reasonable chance that painless motion in a functional range can be obtained, the Kirchner wires are removed after two or three weeks. If the original deformity, loss of motion, and destruction is so extensive that I believe it unlikely that painless motion will be restored, the Kirchner wires are left in position for six to eight weeks. Thereby, firm fibrous ankylosis, and in some instances, bony ankylosis, is encouraged. Motion in the metacarpophalangeal joints is started 10 to 21 days following surgery. For the thumb, arthrodesis of the interphalangeal joint is often the procedure of choice, even though fairly good articular cartilage remains.[5] Occasionally, it is advisable to perform arthrodesis on both the interphalangeal and metacarpophalangeal joints. However, in the majority of patients, if the hyperextension deformity of the interphalangeal joint of the thumb is corrected by arthrodesis in 20 to 30° of flexion, the hyperflexion deformity of the metacarpophalangeal joint can be corrected and maintained by Kirchner wire fixation for a period of six to eight weeks in the same manner that is done for flexion and hyperextension deformities of the interphalangeal joints of the fingers.

Joint Resection

Resection of the metatarsal heads and a portion of the proximal phalanges is practiced by many orthopedic surgeons when the metatarsophalangeal joints have been destroyed and dorsal dislocation of the phalanges has occurred. Frequently such a deformity is accompanied by painful callosities on the foot. In my experience, the deformity can be corrected and the calluses prevented or relieved by an operation that does not shorten the metatarsals. Such, I believe, restores better function of the foot. The proximal phalanges are removed and the plantar condyles of the metatarsals are resected. The distance of the heel-metatarsal head strike during walking and standing is not shortened by this procedure.

Occasionally, resection of a portion of other joints is advisable. Resection of the head and neck of the femur when the hip joint is severely destroyed, the Girdlestone operation, formerly was performed rather frequently for patients with rheumatoid arthritis. Today, such is not done unless infection has also been present.

Discussion

Patients with rheumatoid arthritis who are selected for surgical procedures in the process of rehabilitation must be carefully screened. A team approach utilizing the help of the family physician, the rheumatologist, the physiatrist, and the orthopedist, insures proper selection and postoperative recovery to the fullest extent.

It must be emphasized that fully two-thirds of the patients who have rheumatoid arthritis respond satisfactorily to nonsurgical measures and thus are not candidates for operation. A comparatively small percentage of the remaining one-third are suitable candidates for operation.

In addition to the surgical procedures discussed, others of value in the treatment of patients with rheumatoid arthritis are: release of contractures, replacement of displaced tendons, repair of ruptured tendons, decompression of nerves and tendons, and excision of nodules and inflamed enlarged bursae.

The surgical treatment of juvenile rheumatoid arthritis is a subject in itself. Surgical intervention is indicated in an even smaller percentage of children than in adults with rheumatoid arthritis. Only occasionally will synovectomy be of value. Almost never is arthroplasty or arthrodesis indicated in a child. Surgery may be necessary to relieve contractures that have developed, but far better is their prevention.

All physicians who treat children with juvenile arthritis must be aware of the associated incidence of eye problems that can lead to blindness. One may be lulled into a sense of false security when only one or a few joints are involved by the disease process. But, it is these children who are most prone to develop iridocyclitis. Thus, examination of the eyes, using a slit lamp, must become a part of the routine management of these children. This must be done not only during the active phase of the disease, but also as a part of subsequent follow-up examinations.

Conclusion

Treatment of the patient with rheumatoid arthritis requires a team approach. Only by such an approach can those comparatively few who are candidates for arrestive or so-called prophylactic surgery be properly selected and the best postoperative results assured. The same statement applies only to a slightly lesser extent for those patients who might be candidates for reconstructive surgical procedures.

Arthroplasty by prosthetic replacement of joints has, to date, been successful in the restoration of comparatively painless function for patients whose hips and knees have been destroyed by rheumatoid arthritis. What the long-term results will be, only time will tell.

After the cause of rheumatoid arthritis is determined, it is likely that there will be a backlog of thousands of patients with deformities who can be helped by orthopedic surgery.

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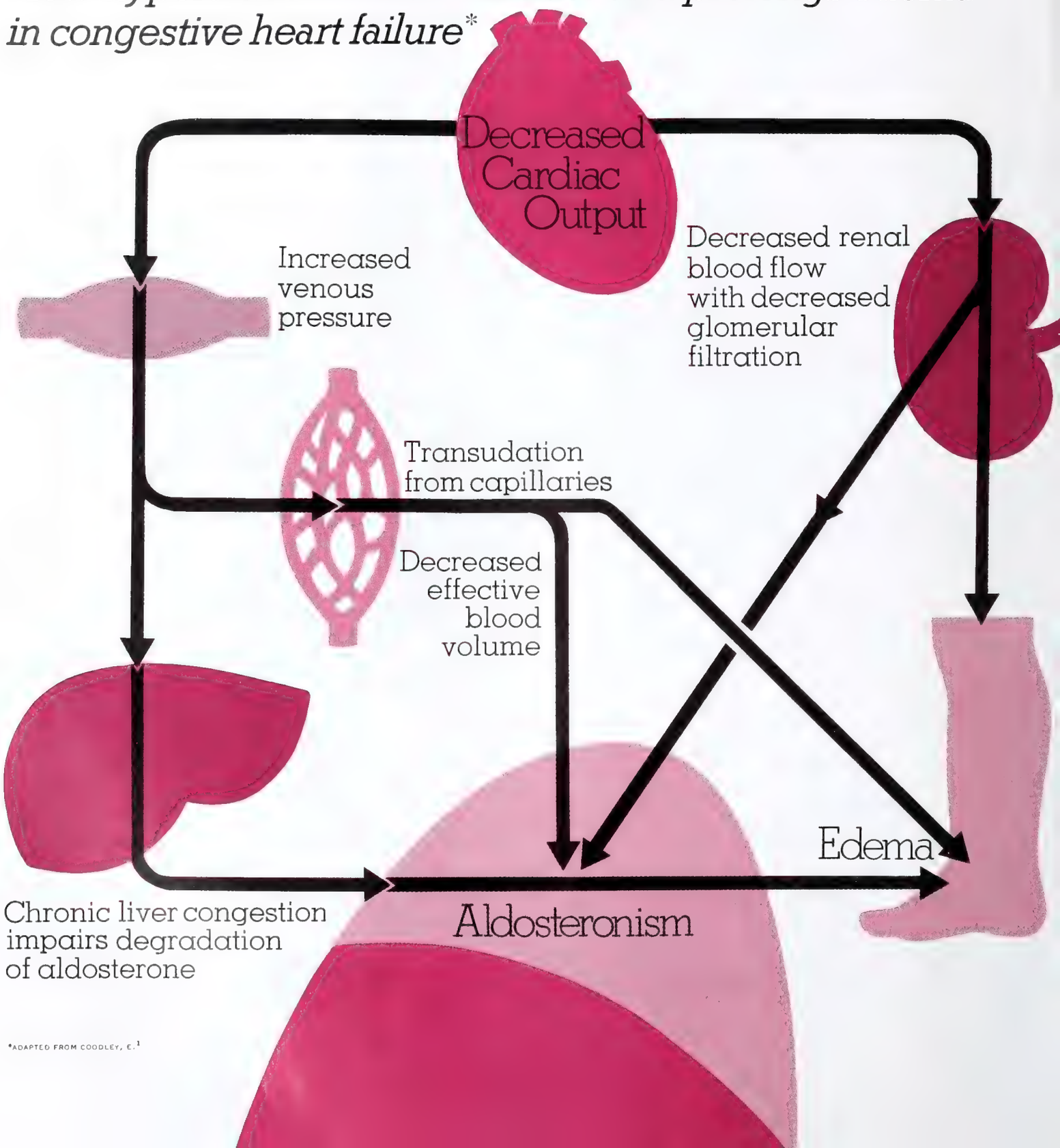

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1. As the only diuretic

- Often sufficient alone.
- Produces gradual, sustained diuresis by blocking aldosterone action in the distal renal tubule.
- Avoids potassium loss.

2. As the basic daily diuretic with an "add-on" alternate-day-diuretic ("A.D.D." schedule)

- Can be administered daily as basic therapy with the additional agent (furosemide or ethacrynic acid) given every second or third day.
- Aldactone plus "A.D.D." schedule minimizes potassium deficiency and potentiates effect of "add-on" diuretic.[2]
- Avoids acute volume depletion and aldosterone rebound.[2]

3. As a daily diuretic in combination with a daily dose of a thiazide

- Permits daily additive diuretic effect while maintaining potassium balance.

Indications—Essential hypertension; edema or ascites of congestive heart failure, cirrhosis of the liver and the nephrotic syndrome; idiopathic edema. Some patients with malignant effusions may benefit from Aldactone (spironolactone), particularly when given with a thiazide diuretic

Contraindications—Acute renal insufficiency, rapidly progressing impairment of renal function, anuria and hyperkalemia

Warnings—Potassium supplementation may cause hyperkalemia and is not indicated unless a glucocorticoid is also given. Discontinue potassium supplementation if hyperkalemia develops. **Usage of any drug in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the mother and fetus.**

Precautions—Patients should be checked carefully since electrolyte imbalance may occur. Although usually insignificant, hyperkalemia may be serious when renal impairment exists; deaths have occurred. Hyponatremia, manifested by dryness of the mouth, thirst, lethargy and drowsiness, together with a low serum sodium may be caused or aggravated, especially when Aldactone is combined with other diuretics. Elevation of BUN may occur, especially when pretreatment hyperazotemia exists. Mild acidosis may occur. Reduce the dosage of other antihypertensive drugs, particularly the ganglionic blocking agents, by at least 50 percent when adding Aldactone since it may potentiate their action.

Adverse Reactions—Drowsiness, lethargy, headache, diarrhea and other gastrointestinal symptoms, maculopapular or erythematous cutaneous eruptions, urticaria, mental confusion, drug fever, ataxia, gynecomastia, inability to achieve or maintain erection, mild androgenic effects, including hirsutism, irregular menses and deepening voice. Adverse reactions are infrequent and usually reversible.

Dosage and Administration—For **essential hypertension** in **adults** the daily dosage is 50 to 100 mg. in divided doses. Aldactone may be combined with a thiazide diuretic if necessary. Continue treatment for two weeks or longer since an adequate response may not occur sooner. Adjust subsequent dosage according to response of patient

For edema, ascites or **effusions** in **adults** initial daily dosage is 100 mg. in divided doses. Continue medication for at least five days to determine diuretic response; add a thiazide or organic mercurial if adequate diuretic response has not occurred. Aldactone dosage should not be changed when other therapy is added. A daily dosage of Aldactone considerably greater than 75 mg. may be given if necessary.

A glucocorticoid, such as 15 to 20 mg. of prednisone daily, may be desirable for patients with extremely resistant edema which does not respond adequately to Aldactone and a conventional diuretic. Observe the usual precautions applicable to glucocorticoid therapy; supplemental potassium will usually be necessary. Such patients frequently have an associated hyponatremia—restriction of fluid intake to 1 liter per day or administration of mannitol or urea may be necessary (these measures are contraindicated in patients with uremia or severely impaired renal function). Mannitol is contraindicated in patients with congestive heart failure, and urea is contraindicated with a history or signs of hepatic coma unless the patient is receiving antibiotics orally to "sterilize" the gastrointestinal tract.

Glucocorticoids should probably be given first to patients with nephrosis since Aldactone, although useful for diuresis, will not directly affect the basic pathologic process.

For **children** the daily dosage should provide 1.5 mg. of Aldactone per pound of body weight

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Brief Summary

Indications—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

Contraindications—Drug hypersensitivity and porphyria.

Warnings—Not recommended during the first and second trimester of pregnancy. Caution patients of possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in blurring of vision, paralysis of accommodation and profound hypnosis. Caution patients concerning driving a motor vehicle, operating machinery, or other hazardous operations requiring alertness after taking the drug. ADMINISTER WITH CAUTION TO PATIENTS WITH SUICIDAL TENDENCIES AND DO NOT PRESCRIBE LARGE QUANTITIES OF THE DRUG. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY OVER A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible early withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, slurring of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other less well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

Precautions—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitryptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient giddiness or ataxia may occur.

Adverse Reactions—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, dizziness, facial numbness, and allergic reaction typified by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 305432

Extraskeletal chondrosarcoma

Jerry P. Moore, MD; Emmet Shannon, MD

A case report of chondrosarcoma arising in a soft-tissue location is presented. Primary soft-tissue chondrosarcoma is a rare lesion, as only 31 cases have been recorded previously. Limited experience with this lesion suggests that it behaves in a less malignant fashion than the much more common chondrosarcoma of bone.

Chondrosarcomas arising in soft-tissue sites where cartilage does not normally occur are rarely observed. The most recent comprehensive report in the English literature listed only 26 cases until 1967.[1] Since then, five additional cases of extraskeletal chondrosarcoma have been recorded. Sites were the tongue,[2] maxillary region,[3] diaphragm,[4] extrapleural soft tissues,[5] and the soft tissues of the knee region.[6]

Because of the extreme rarity of the soft-tissue chondrosarcomas, the experience of any one practitioner, and indeed any one institution, with these lesions is limited. All tumors with this degree of infrequency should be reported in hope that the clinical pattern of behavior may be better elucidated. Recently we have observed and followed for one year postoperatively a case of extraskeletal chondrosarcoma which exhibited the unique feature of a preexistent soft-tissue mass at the tumor site present for ten years before its suddenly rapid growth necessitated excision.

Case Report

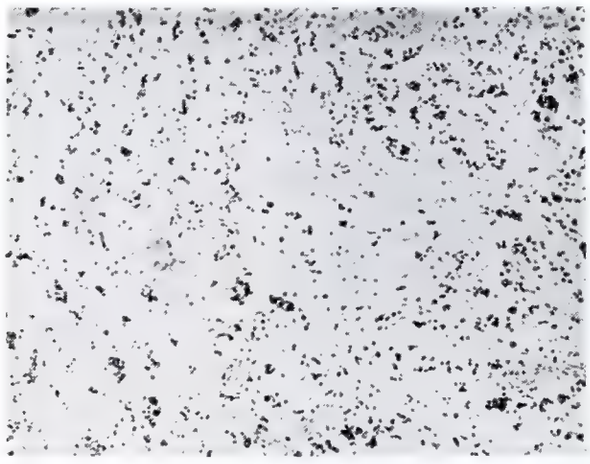
In February of 1972, a 17-year-old Caucasian male complained of enlargement of a small mass which had been present for ten years along the superior-medial aspect of the right knee. This previously stable mass tripled in size over a period of only two to three months. The mass had never been painful, nor had it precipitated joint dysfunction even after it began rapid enlargement. Trauma of significance had never occurred in the knee region, nor had there ever been any clinical or roengentographic evidence of synovial chondromatosis.

Gout had been diagnosed in the past, although the patient was asymptomatic at the time we examined him. Soft-tissue tophi had never been noted. Hypertension requiring treatment had been present for several years, and occasional cardiac arrhythmias and shortness of breath after exertion had been recent additional complaints.

Blood pressure on admission was 180/100 mm Hg, and occasional premature ventricular contractions were present. The only other significant finding on initial physical examination was a firm mass, 5.0 cm in diameter protruding from the supermedial aspect of the right knee. It appeared to be slightly fixed to the underlying extensor muscle group. However, the mass did not interfere with the full range of knee motion. There was no evidence of gout on physical examination, and the serum uric acid level was never recorded higher than 7.1 mg/100 ml. Roentgenograms of the knee were normal except for a mass with soft-tissue density which could be seen along the lower medial thigh. This mass lacked opaque stippling or any other suggestion of calcification.

At surgery, an apparently encapsulated lobular tumor mass protruded out from a soft-tissue plane just anterior to the semimembranosus muscle, a site corresponding to the location of the commonly present semimembranosus bursa. There was no evidence that the tumor was connected at any point to the capsule of the knee joint. The tumor was shelled out with surprising ease except for one aspect where the tumor's thin pseudocapsule was continuous with a portion of the vastus medialis and its ten-

1. Bisected gross specimen of tumor removed at surgery. Darkened areas generally adjacent to tumor's pseudocapsule represent recent hemorrhage into the tumor.



2. Typical field of the tumor at low power. Note some isolated chondrocytes with single, small, rounded nuclei, although frequently the cells show multinucleation. X 58.

don. A small portion of the extensor tendon was excised with the tumor, enabling all of the grossly visible tumor to be removed.

The pathologist's report on the frozen section indicated a low-grade chondrosarcoma. Upon gross examination of the surgical specimen, tumor measurements were 9.0 by 8.0 by 3.5 cm. Externally the tumor had a smooth, glistening, grayish-white lobular appearance except for one small area which presented a few tan to whitish fibromuscular tags. A freshly-cut section through the mass revealed a whitish to grayish glistening, mucoid tumor tissue, containing several well-defined areas of purplish to reddish discoloration suggesting recent hemorrhage (Fig 1). Distinct tumor lobules were separated by yellowish-gray fibrous streaks, which were in continuity with the 1-2 mm thick capsule.

Microscopic examination revealed a moderately well-differentiated chondrosarcoma. Many areas of the tumor showed a poorly cellular basophilic matrix with scattered small chondrocytes, usually having relatively minor atypical features (Fig 2). The more cellular fields showed clusters of chondrocytes with definite sarcomatous features. Under high power, most tumor chondrocytes showed reversal of nuclear-cytoplasmic ratio and moderate hyperchromatism. Multiplicity of chondrocytic nuclei was an outstanding feature (Fig 3). However, mitotic figures were extremely rare and bizarre mitoses were never observed. In the least differentiated areas, the nuclei tended to be ovoid and the chondrocytes more elongated, but only rare areas at the periphery appeared to be fibroblastic. Areas of hemorrhage were observed, generally beneath the fibrous pseudocapsule of the tumor. Benign-appearing fibrous septa occurred between the large tumor lobulations. Calcification was not ob-

served. Numerous sections failed to demonstrate any cartilaginous tissue which could be unequivocally designated as a benign chondroma.

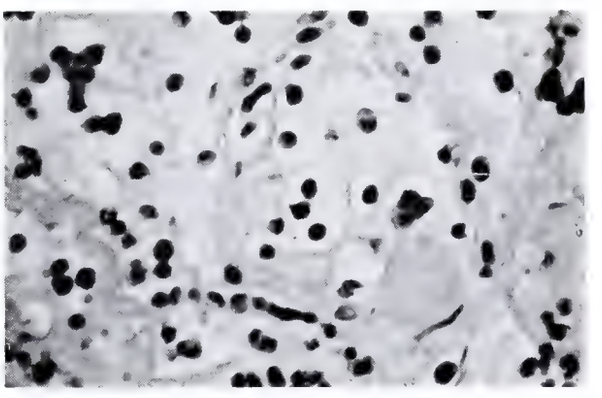
Fourteen months later (April, 1973) the patient was found to have local tumor recurrence. A 5.0 x 5.0 x 2.5 cm nodule was found within the original tumor bed. In addition, there were several 0.5 cm to 2.0 cm diameter hemorrhagic tumor nodules attached to underlying muscle fascia and nearby subcutaneous fat. All of the recurrent tumors had the same histologic features as the initial tumor, except for a proportionately greater degree of intralesional hemorrhage. There was no evidence of distant metastasis. The patient's general medical condition was thought to preclude amputation.

Discussion

The impression may be gained from review of the literature that the extraskeletal chondrosarcomas are less virulent than the malignant cartilaginous tumors arising in bone. However, too few cases of the soft-tissue lesions have been followed long enough to completely substantiate this impression. Extraskeletal chondrosarcomas have been reported to recur as early as two months and as late as 15 years after excision of the primary tumor.[1] Of the four cases reported since 1967, survival was brief or followup was no longer than three months.[3-6] The 1967 comprehensive review noted that tumor recurrence was observed in 11 of the 26 cases, with development of distant metastases in four patients. Unfortunately, few cases in the older literature had long follow-up. The longest recorded survival free of disease in the 31 cases reported to date has been 17 years.[1]

The tumor reported here, and those tumors illustrated in the literature, have gross and microscopic features unequivocally characteristic of chondrosarcoma. These tumors tend to lack the cellular pleomorphism often seen in chondrosarcomas of bone and in many soft-tissue sarcomas. As our photomicrographs show, the histologic pattern is distinctive. However, one possible source of confusion is a recently described entity referred to as "mesenchymal chondrosarcoma."[7,8] The mesenchymal chondrosarcoma clinically behaves in a quite different fashion, generally presenting at an earlier age and pursuing an obviously malignant course. Histologically there should be no confusion since the mesenchymal chondrosarcoma is a tumor with highly undifferentiated mesenchyme within which islands of well-differentiated cartilage abruptly appear.

The question of origin of the extraskeletal chondrosarcoma has arisen in several of the reports.[1,2,9,10] When Stout and Verner first clarified extraskeletal chondrosarcoma as a distinct tumor entity, they expressed the opinion that this soft-tissue sarcoma always arose *de novo* from mesen-



3. Under high power, the nuclei are hyperchromatic and enlarged relative to the cytoplasmic volume. Note chondroid matrix, lacunar spaces typical of cartilage, and tendency toward multinucleation. X 261.

chymal tissues without any preexisting stage of benign chondroma.[6] However, though unable to demonstrate in any of their seven cases a benign chondromatous lesion undergoing malignant degeneration, Goldenberg et al still expressed the opinion that a benign chondroma could become obliterated by an overgrowing chondrosarcoma arising within it. In only one case report has any microscopic evidence been offered supporting the claim of chondrosarcomatous origin in a benign soft-tissue chondroma.[2]

In our case, despite the long history of a "quiescent" lesion at the site of tumor development, we have neither prior biopsy evidence nor current histologic demonstration of any preexistent benign lesion. We therefore support the *de novo* hypothesis regarding chondrosarcomatous origin in this instance.

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Velopharyngeal incompetence

Peter Randall, MD

Velopharyngeal (v-p) incompetence has a direct bearing on the diagnosis and treatment of a number of conditions. V-p incompetence refers to the inability of the soft palate or velum to achieve tight closure against the posterior pharyngeal wall, which it should do normally at the level of the adenoid tissue. V-p closure is needed for good speech. V-p incompetence produces so-called "cleft palate type" speech. The incompetence can vary from slight, to incomplete or inconsistent, to marked or severe incompetence. Similarly, the speech can be slightly or severely affected.

Relevance

To the neurologist, the finding of v-p incompetence is of particular interest when seen in the absence of cleft palate. An isolated weakness or paralysis of the levator palati muscle can be due to a number of conditions, some stationary, some progressive, some unilateral, and some bilateral.[1] Therefore, the finding of hypernasal speech under these conditions warrants close examination.

Persistent middle ear abnormality is seen in about 94% of infants with cleft palate. In the past, when these children have grown up, about 30% have had a 30-40-decibel permanent hearing loss in one or both ears.[2] Avoidance of this situation is one of the newest challenges to the otolaryngologist. However, the same situation can occur with the elusive submucosal cleft or with a congenitally short palate. These entities are of further interest to the otolaryngologist because even though children might have normal speech and an adequate velopharyngeal mechanism, the closure achieved under these conditions might well represent the maximum possible excursion of the soft palate. Should this closure be accomplished against a large boggy mass of adenoid tissue, even though the speech is not affected, an adenoidectomy can render such a palate completely incompetent. Cleft palate-type speech can result.[3] Adenoid tissue that shrinks gradually will usually be accompanied by a compensatory increase in excursion of the soft palate. The finding of a bifid uvula or a thinning in the midline of the soft palate can be a real danger signal to the otolaryngologist, and warrants a soft palate x-ray study to determine how well the soft palate is achieving closure and how much adenoid tissue exists.[4] This should certainly be done under these conditions prior to an adenoidectomy (Fig 1).

At the Children's Hospital of Philadelphia, in one large series of patients, 23% of children with clefts had some other congenital anomaly as well. Why should this figure be so high? First, this hospital tends to attract the complicated case. Secondly, the anomaly of a cleft of either the lip or palate seems to be a deformity which is fairly easily produced. Its general incidence is about 1 in 776 live births, which makes it the most frequently occurring congenital anomaly of major proportions that is seen. There is good genetic evidence that it can result from several different causes and through several different mechanisms. Thus, it seems that if an embryo is subjected to a major teratogenic insult sufficient to produce anomalies, a cleft is likely to be included.

Finally, a number of ways are now available to improve the function and efficiency

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of the cleft palate operated on years ago. Consequently, there are many older children and adults who were operated on in the past who still have cleft palate-type speech and who are potential candidates for further improvement. They cannot all be helped, but if improvement of their speech defect can be achieved through improvement of the speech mechanism, it should be investigated. These patients are referred to us by physicians in all walks of life, by nurses, school health officials, and paramedical personnel. A number of these people can be helped further, and it is to their interest to have this information disseminated widely.

It should be known that even in the best of hands, most surgeons are able to achieve about a 70 to 80% incidence of good speech results following a definitive palatal closure.[5] This means that a majority of patients with cleft palate who are operated on today should have no vestige or stigmata of cleft palate-type speech. It also means that there is a large percentage of children who have not achieved normal speech and who should be studied to see if their results can be improved. In many cases they can be and yet there is a prevalent feeling today that if a child has a cleft he can be expected to have defective speech forever. This is not true.

Anatomy

The soft palate is a remarkable structure. It starts working in its valving patterns as soon as the newborn baby starts to breathe, to cry, and to swallow. It must move quickly, completely, effortlessly, and under accurate control. Its ease of motion is similar to a blink and its reconstruction must be handled by the surgeon as carefully as the rebuilding of an eyelid.

The major muscle that achieves this action is the levator palati muscle (also known as the levator veli palatini muscle). This is a sling-like muscle innervated through the

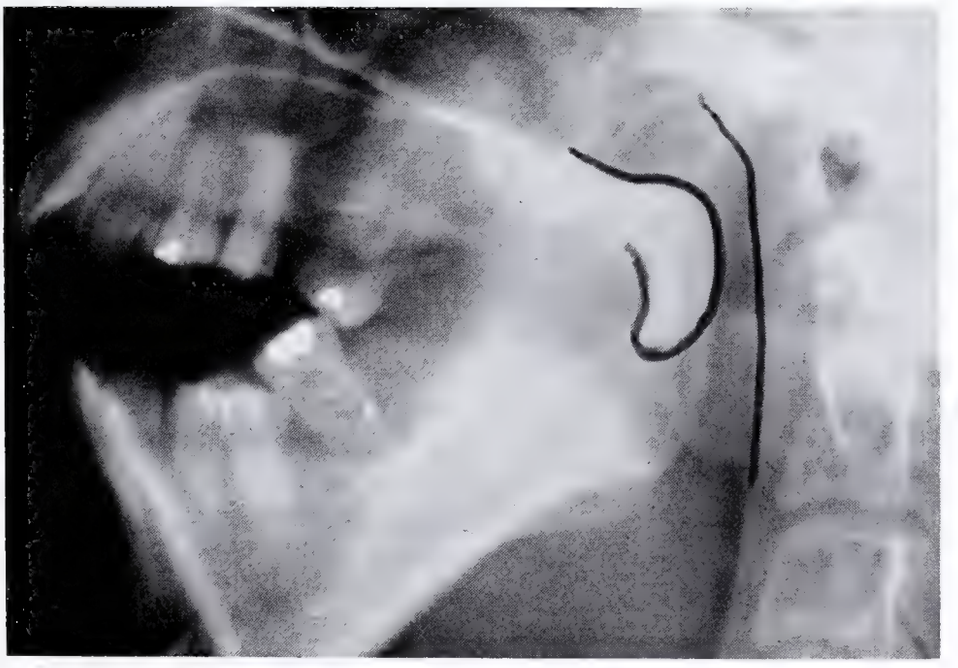
1. Maximum velopharyngeal closure following adenoidectomy in a patient with an active but congenitally short palate, showing severe incompetence. (Same x-ray right and left, dorsum of tongue, soft palate and posterior pharyngeal wall outlined on right). This patient had minimal cleft palate-type speech before her adenoidectomy, which should have indicated a need for

pharyngeal plexus and nourished through the ascending pharyngeal branch of the facial artery. It arises from the undersurface of the petrous part of the temporal bone, and from the media lamina of the cartilage of the eustachian tube. It extends downward and forward and enters into the substance of the middle third of the soft palate to fuse in the midline with the fibers from the opposite half. In contraction, it pulls this middle third of the soft palate upwards and backwards to bring it in firm contact with the posterior pharyngeal wall at the level of the adenoid pad.

A number of other muscles in this area contribute to velopharyngeal closure, but to a lesser degree. The superior pharyngeal constrictor is one. In normal velopharyngeal closure the sidewalls of the pharynx move slightly toward the midline, and in patients with inadequate levator palati excursion, this lateral pharyngeal motion becomes considerably exaggerated. It is an early signal of velopharyngeal incompetence, and can be examined by direct observation.

Speech

Speech is a bodily function that many of us take for granted. Little is taught about speech in medical schools, and yet inability to communicate normally can cause terrible problems socially. It can interfere seriously with one's education, and ability to get a job. In a sensitive child, speech defects can produce major emotional difficulties. Velopharyngeal incompetence is only one of many causes of speech problems. Indeed in the patient with a cleft palate, even though it is probably the major cause of abnormal speech, there are many other possible causes as well. For instance, a loss of hearing particularly in the higher frequencies can make it difficult for a child to hear the "s" sound in a spoken word. If he doesn't hear it, he will produce the word omitting the sound he doesn't hear. A child



x-ray studies prior to her adenoidectomy. Removal of her adenoids produced severe incompetence and severe cleft palate-type speech. The condition improved with a posterior pharyngeal flap. (From Randall P: Surgery and speech. Surgery 56:810-819, 1964.)

with a cleft palate might well be raised in an environment of a parent or sibling with the same problem and with poor speech. The child learning speech from a mother will mimic the speech that he hears. Major dental problems can interfere with proper articulation. Lack of motivation, discouragement in the face of little progress after years of speech training, and finally a lack of appreciation that something can be done can all contribute to speech problems.

The soft palate is a remarkable structure. It should move quickly, effortlessly, with little fatigue, and with considerable control and accuracy. For most sounds in the English language, complete velopharyngeal closure is necessary. By closing off the nasal passages from the mouth, one is able to build up intraoral air pressure to make an explosive sound such as the "plosive" consonants "p," "k," "t," etc. Their tone is altered by the site of pressure release, and by the selected use of the vocal cords as in the consonants "b" and "d." Sound is also made by friction as in "s," "f," "sh," and with vocalization as in "z." In addition the vowel sounds have a controlled amount of nasal resonance. In English most are produced without a nasal quality by using the soft palate to prevent air from entering the nose. Consequently, v-p closure is needed for virtually all sounds in English except the nasal consonants of "m" and "n" and also for the "ing" sound. The child with cleft palate-type speech is unable to exercise this control, the vowel sounds become quite hypernasal, and the consonant sounds misarticulated or omitted.

In some foreign languages a hypernasal quality is used in normal production. It would seem that people with v-p incompetence would have less trouble speaking French or Vietnamese for this reason. However, the hypernasality noted in these languages is an integral part of certain specific sounds, and it is used in a very controlled manner. If it cannot be controlled, the distortion is just as bad if not more severe because one's ear is attuned to the careful use of the nasal quality. This type of nasal resonance as used in the French word *"garçon"* is quite different from the nasal twang of the Philadelphia or the Bronx accent.

Lacking v-p closure, the child either distorts what he says, omits the sound he can't say (so that "daddy" becomes "ah-eee"), or uses a substitute sound such as a "stop plosive" at the level of the glottis. The main object of palatal surgery is to provide an adequate palatal mechanism before formal speech develops so as to avoid the development of incorrect speech patterns. Speech is such an automatic process that it becomes more and more difficult to correct incorrect speech the longer it becomes established.[6]

Most palatal surgeons prefer to close the soft palate cleft when the child is between one and two years of age. In capable hands, this is sufficient to achieve good velopharyngeal valving as noted in 70 to 80% of the children. Under these conditions the child should have no evidence of the hypernasal quality which is so typical of cleft palate-type speech, no leakage of air into the nose on sounds requiring the buildup of intra-oral air pressure ("nasal escape") and no distortion of articulation. This type of speech should not sound abnormal in any way, and should be consistently good. Once achieved, there is little likelihood that it will not continue.

Some sounds, particularly "sss" and "sh," are more difficult for children with cleft palate to produce than others. When mixed with other consonants in blends such as "st," "sl," and "sn," an even higher degree of speech achievement is needed. As the efficiency of the v-p mechanism is interfered with to a greater and greater extent, first one abnormality and then another appears. These may vary in sequence, and because of the effectiveness of the accessory muscles in this area, some patients can exert enough extra effort to overcome minimal amounts of v-p incompetence. Ac-

cordingly there are some patients who exert enough effort to produce good speech in a testing environment, but in relaxed conversational speech or when fatigued, they speak poorly.

Neurology

Neurologically, in the absence of cleft palate, v-p incompetence is seen as either an isolated loss of levator palati muscle action which can be partial or complete, unilateral or bilateral, or as part of a neurological deficiency affecting this muscle along with other muscles. Cleft palate-type speech due to v-p incompetence is not unusual in the child with cerebral palsy. Isolated loss can also be due to idiopathic conditions or to known paralytic illnesses which fortunately are rare in the United States. Correction of the incompetence with a posterior pharyngeal flap operation has been quite effective if the superior pharyngeal constrictor muscle is working well, and particularly when this muscle has become hyperactive as part of the attempt to overcome this weakness in the levator palati muscle. When the other swallowing muscles are affected, as in cerebral palsy, such a patient should be watched very closely in the postoperative period for respiratory distress. These patients have trouble swallowing and in handling secretions. A tracheostomy may have to be done if the situation cannot be controlled with a tongue stitch to retract the tongue or a nasopharyngeal airway placed past the posterior pharyngeal flap.

Otolaryngology

A situation seen by the otolaryngologist which can be associated with disastrous results is the patient with a bifid uvula who has an adenoidectomy and whose palate is rendered incompetent as a result. Several factors contribute to this. First, a bifid uvula is surprisingly common; 2% were found in a large series of patients studied by Meskin.[7] Obviously only a small percentage of these patients had v-p incompetence. A bifid uvula might indicate either a submucosal cleft or a congenitally short palate, and the normal speech found at the time of examination could be due to v-p competence which is depending on a rather large mass of adenoid tissue. Removal of this bulk of tissue can render such a palate completely incompetent. The easiest way to ascertain the amount of adenoid tissue and to tell whether the palate is barely achieving "touch closure" against the adenoids or whether it is achieving much more complete closure with the adenoid pad is to take a lateral x-ray film of the soft palate while the child is enunciating sounds such as "sss," "eee," and "dah." The "mmm" sound is included in the study to show the extent of forward excursion of the palate. If v-p closure is in doubt, it is probably best to leave the adenoids alone or to remove just the lateral portion. Tonsillectomy under these conditions probably is not contraindicated.

V-p incompetence is often associated with chronic otitis media. The amount of incompetence may be slight and may interfere little with speech, particularly in a three- or four-year-old patient who has a high-pitched voice. But the ear disease can be persistent and respond sluggishly to treatment until the minimal v-p incompetence has been corrected. It has also been shown that the child whose velopharyngeal mechanism is not quite adequate, but who is able to achieve competency through extra effort and straining, will have a high incidence of vocal cord nodules.

Pediatrics

The combination of deafness due to this complication, and difficulty in communication because of the v-p incompetence, has led to still another condition which sometimes is mistakenly thought to be the primary problem. These children at times are mistakenly thought to be mentally retarded

and to have severe behavior problems.[8] They don't respond to stimuli as they should, they don't communicate well at an early age, and they become very frustrated in trying to make their wishes understood. Under these conditions the primary diagnosis might erroneously be mental retardation, or pathological behavior. At times I am convinced that even a young child is smart enough to be reluctant to speak if his palate is incompetent and he cannot be understood. Such a patient often becomes verbose as soon as the incompetence is corrected. One mother complained that she never remembered hearing her son "yell at his sister" before his palatal incompetence had been corrected.

Some patients are mentally retarded and, in addition, have a communication handicap due to v-p incompetence and a persistent hearing loss. Philosophically, one wonders whether a surgical procedure is justified if the patient is already retarded. My personal feelings are that such a patient is always struggling with more than his share of handicaps. If it is possible to improve one or more, perhaps the child will be able to handle the others more satisfactorily and become more productive. Furthermore, improving the v-p incompetence may improve the condition of his middle ear disease which is a usual accompanying condition.

Other Anomalies

Anomalies of two varieties are seen along with palatal clefts. A group apparently occurs because the patient has been subjected to a severe fetal insult, and a number of malformations have resulted. These can include a variety of deformities.

In addition, there are other anomalies which can occur in the general region of the cleft. Isolated cleft palate has a rather high incidence of cervical spine deformities.[9] Basilar skull defects are frequently associated with clefts, and when the cleft involves the lip as well, maxillary and septal distortions are noted. In the patient with Pierre Robin syndrome the deficiencies are most likely to be mandibular.[10] It should be noted that often a patient with major facial anomalies is so distracting in his appearance that a minor cleft of the palate is not noticed until serious speech problems arise.

Testing

There are many ways of testing for v-p incompetence. Hypernasal speech usually is caused by v-p incompetence.[11] Articulation errors as described earlier might also be an indication of incompetence. With such sounds, there is frequently an audible leakage of air into the nose, known as "nasal escape," which can be further documented by noting fogging on a cold metal surface or the blowing of a wisp of tissue when held under the nose. The patient may attempt to achieve some further degree of closure by overaction of the accessory muscles that constrict the anterior nasal passages. This will produce a grimace, particularly when trying to pronounce words such as "sister," "shoes," and "Santa Claus." Sophisticated air flow meters give the same result but with far greater accuracy.[12,13]

A simple lateral x-ray taken while the patient is enunciating the speech sounds shows the palate in great detail. It requires no specialized equipment but it is essential that the technician understand what has to be done, so that the films are taken while the child is enunciating the sound. Greater sophistication is achieved with sound cinefluorographic techniques, or on video tape.[14] While these images usually lack the details seen on the simple lateral films, they add the dynamic quality which is helpful in assessing function. Direct examination with a panendoscope is another method of direct evaluation.[15] Sound spectrographic examination is just beginning to be a useful diagnostic tool in this area.[16] There are a number of ways to determine the

presence or absence of v-p incompetence, and to assess the severity of the incompetence and the function of the accessory muscles.

Treatment

There are a number of ways that an incompetent palatal mechanism can be treated to render it more capable of achieving v-p closure. The most dependable ways are surgical, and in this country the use of a large pedicle flap of the posterior wall, including pharyngeal mucosa and the underlying muscle in the form of a posterior pharyngeal flap, is the most popular.[17] This flap is sewn permanently into the soft palate, leaving an air passage on either side. It can be constructed with its base placed either inferiorly or superiorly. It acts as an obturator, and also renders the superior pharyngeal constrictor muscles much more competent in achieving valving against the sides of the flap. In addition, it has a tendency to shrink, and to pull the soft palate towards the posterior pharyngeal wall as it does so.

In patients with minimal deficiency and with good motion in the palate, success has been achieved in building the posterior pharyngeal wall forward.[18] The use of shredded Teflon appears to be best suited for this purpose.[19] Various procedures designed to lengthen the palate have been advocated, but seem to have limited use.

Patients who are severely scarred in the soft palate area, who are poor operative risks, or who refuse surgery can be helped with the use of a dental prosthetic obturator to fill this space.[20] Again, the superior pharyngeal constrictor is used as a valving muscle.

Speech training is another means of improving palatal function. It is useful and essential in the correction of articulation errors, but it is dependent on a mechanism which is capable of achieving adequate v-p closure. In this complicated area of medical care, a cooperative team approach has tremendous value.

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When to use cortical bone grafts

Paul R. Lipscomb, MD

During the past 30 years, the place of cortical bone grafts in the role of bone repair has been forgotten. The tendency now is to use large metal plates and cancellous bone removed from the ilium to repair bone defects. For some patients, especially children, cortical grafts may be superior.

Prior to World War II, essentially all bone grafts were of the cortical variety. Now, almost all such grafts are derived from the iliac bone and are thus cancellous in nature. There is a place for both types of grafts. This was pointed out in 1944 by Murray,[12] who wrote, "The reason for most failures of bone grafting in good hands is 'routine' . . . preoperative, operative or postoperative. The technique, the procedure, and the type of graft may have to vary to meet the basic conditions encountered in the individual case. Insistence that the situation must adapt itself to a standard procedure is responsible for the most part for lack of success following technically properly performed bone grafting operations. It is essential instead that we adjust the total procedure to meet the demands inherent in the situation in the individual case."

Historical Developments

Most orthopedic surgeons in the United States, more than half of whom were certified in the past decade, have not learned the value of cortical grafts. They consequently use iliac grafts in all situations where bone grafting operations are indicated.

In review of the literature, from the classic articles by Phemister[13] in 1914 to that by Abbott and associates[2] in 1947, we are able to trace the complete about-face which has resulted in the abandonment of cortical grafts.

Phemister stated that osteogenesis in bone repair occurs from the inner layer of the periosteum and the endosteum and, to a much less extent, from bone cells. Ghormley and Stuck[7] in 1934 pointed out that periosteal transplants in old animals do not produce new bone. They also stated that cancellous bone united more quickly and more firmly than cortical bone, whether taken from the cancellous bone of the ilium or from the endosteum of the tibia. The union between grafts taken from the iliac crest and the spinous processes and lamina were without exception the best that occurred with any type of graft. In 1942, Ghormley[6] stated, "Where speed of union is important, the cancellous graft of some type is probably the best . . ." He also stated, "In some instances in which the shearing force may be great and external fixation inadequate, as in ununited fractures of the neck of the femur, a stronger graft than the simple tibial cortical graft may be necessary and a fibular graft may be used. Where such a tubular bone is used, the strength of the graft is much greater and the graft will better withstand the shearing force mentioned."

In 1944, Abbott[1] stated, "Cancellous bone grafts taken from the ilium have been used with success in ununited fractures of the shafts of the long bone. Cancellous bone grafts have been found to be an especially advantageous type of graft in the treatment of nonunion of fractures of the ends of the long bones." Abbott and associates[2] in 1947, pointed out again that cancellous bone possessed high osteogenetic power. They also made the statement, "Cortical bone as a grafting material is most useful where strength is of primary

importance, as in the ununited fractures of the shafts of the long bones. Cancellous bone as a grafting substance is preferable in the treatment of ununited fractures of the ends of long bones and defects of bones caused by tumors or infection, for fusion of joints, fusion of the spine, and in correction of severe deformity by the open-wedge type of osteotomy." In this same article, Horn was quoted, "In complete defects of bone, where shortening is not desirable, the use of dual cortical grafts or triple cortical grafts . . . combined with cancellous bone has given the best results. . . . Packing of complete defects of bone with cancellous bone and internal fixation by a plate is unsuccessful as the iliac bone absorbs without the stress of an impacting force, and the plate holds the bones apart." Abbott et al went on to state, "We wish to emphasize that in all these procedures of bone grafting, the less metal used for internal fixation, the better."

In 1946, Dick[4] stated, ". . . if mechanical stability can be maintained by other means while the bone is healing and consolidating, it should be possible to make use of the superior osteogenetic properties of the cancellous bone . . . Ghormley and Stuck[7] . . . showed that, of all the known methods of bone transplantation, that which produced the most rapid and sure new bone formation was the transplantation of cancellous bone chips from the ilium. . . . The main disadvantage of tibial bone graft is that it usually has to be cut from an intact tibia."

In the same year, 1946, Higgs[5] stated, "For the use of cancellous chips to be successful, rigid fixation is necessary . . . chips will shorten, by approximately one half, the time required to produce firm union."

Again in the same year, Luckey and Adams[11] stated, "The type of bone graft varies with the circumstances. Whenever possible, iliac grafts should be used, since they are usually applied easily and replaced rapidly." These authors reported 228 cases, 164 of whom had fractures with nonunions and 64 of whom had arthrodesis.

Experience and Current Practice

For more than 30 years, I have utilized cortical and cancellous bone grafts. Both still have a place in our armamentarium.

Dual Bone Grafts

Sometimes it is better to use dual cortical grafts for osteosynthesis of an ununited fracture or defect in the metaphysis or the shaft of a long bone than to use a massive metal plate and large amounts of iliac bone. The grafts are readily accessible from the anteromedial aspect of the tibia.[3] When properly removed, they do not weaken the tibia to the extent that a fracture in the donor bone is likely. I have removed bone grafts from the tibia on several hundred occasions, and can recall only two instances where subsequent fractures resulted because of weakening at the donor site. In both of these patients, a rotary motion placed on the tibia under stress was the cause of the fracture; they occurred in the first few weeks after the bone was removed.

Tubular Bone Grafts

As advocated by Henderson,[9] a cylindrical graft removed from the middle third of the fibula has been utilized on a number of occasions in carefully selected cases for osteosynthesis of ununited fractures of the neck of the femur. Recently such a graft was inserted in the neck of the femur of a 25-year-old motorcycle rider who had an

ununited subcapital fracture. The stability furnished by the fibula, together with three Hagie pins which also crossed the fracture site and firmly immobilized the head of the femur, obviated the need for external plaster fixation.

Although the surgeon may be justified in removing the femoral head and replacing it with a metal prosthesis in an elderly patient, I do not believe such is warranted for the younger patient with a fresh or ununited fracture of the femoral neck unless there is unequivocal evidence that the vascular supply of the femoral head has been compromised to such an extent that avascular necrosis with collapse is inevitable.

Segmental fibular grafts for replacement of defects in bone ranging from 2 to 15 cm have been used in a significant number of children. The grafts were threaded over Kirschner wires or small pins which also traversed the medullary canals of the proximal and distal fragments of the bone to be bridged, usually the ulna or the radius. In all instances, the grafts quickly united and apparently became revascularized in a short time. Although the diameter of the graft at the time of surgery was sometimes significantly larger than the bone replaced, the grafts remodeled and were reduced to the correct size in accordance with Wolff's law in a few months' time. A similar result was obtained in several children when the shaft of a metacarpal bone from an index or little finger that had been amputated was used to replace portions of metacarpals or phalanges in remaining fingers.

Stress fractures, infractions, and dissolution of the cortical grafts did not develop subsequently in children. This is in direct contrast to my experience and that of others who have used such grafts to replace extensive defects in the long bones of adults.

Sliding Bone Grafts

Phemister onlay cancellous bone grafts will frequently produce union of ununited fractures of the tibia that are in good alignment in adults. It has been my experience that in selected patients, such can be accomplished as quickly and easily by the use of a sliding inlay bone graft. Surgery is thus confined to the involved bone.

The metaphysis of the upper tibia contains an abundant amount of cancellous bone that can be removed easily provided the window in the tibia is in the area immediately inferior to the tibial tubercle. The cancellous bone removed from the tibial metaphysis can be packed about the fracture site.

On occasion, I have used only tibial cancellous bone rather than iliac bone to pack about the ununited fracture. Usually however, when dense sclerotic bone is present at a site of nonunion, the condition of the overlying skin is not compromised and there has been no infection, I prefer to open the medullary cavity and try to stimulate endosteal as well as extraosteal healing. This can be accomplished best by using a sliding bone graft together with cancellous bone removed from the upper tibia.

When the skin has been severely compromised at the site of the tibial fracture or if there has been past infection at the site, then I believe it is better to utilize bone from the ilium. Thereby, further trauma to the tibia is minimized. Frequently following removal of bone from the ilium, the patient will complain much more about pain at the donor site than at the site of surgery in his leg. Hospitalization is apt to be prolonged because of his inability to use crutches early in his convalescence since pain at the iliac donor site is increased by such activity.

Peg Grafts

Occasionally a situation exists such as in an ununited fracture of the medial malleolus of the tibia when osteosynthesis may best be accomplished by inserting a peg graft of cortical bone across the fracture site. Such is readily available from the same tibia, and again it is not necessary to violate another bone to obtain the graft. A key graft may also be utilized on occasion.

Discussion

From the time of the article by Ghormley and Stuck in 1934,[7] the superiority of cancellous grafts in most situations was established. However, none of the mentioned authors thought that the cortical graft should be abandoned completely.

To my knowledge, no one has investigated the difference in rate of bone repair and union in children when cortical versus cancellous bone is used. I suspect that the cancellous graft still produces quicker union in the growing child. Union, revascularization, and remodeling of any graft in a child is usually so rapid that the time factor is probably not of great import. This has been demonstrated time and again when the procedure for stabilization of the subtalar joint, advocated by Grice,[8] has been used.

I have used segmental fibular grafts for replacement of defects of bone in a significant number of children, and I have not encountered the complication of valgus deformity at the ankle reported by some.[10,14] I like to think this is because the grafts are removed in such a manner that the periosteum is left and thus the fibula regenerates. Also, I try to avoid removal of bone from the lower third of the fibula. In the patients I have observed, the fibula almost always regenerates and an intact bone results.

I have had minimal experience with fibular bone grafts in anterior spinal fusions, but these have been advocated by some authors.

Conclusion

When a bone graft is necessary to repair a defect in the shaft of bone in a child, the safest and most suitable site from which to remove the graft often is from his fibula, less often from his tibia, and infrequently from his ilium.

Tubular bone grafts for treating ununited fractures of the neck of the femur and for anterior fusion of the spine in selected adults have much to recommend them. The use of fibular grafts for most other conditions in these patients are contraindicated.

Sliding bone grafts for ununited fractures of the tibia are, in selected cases, superior to so-called Phemister grafts. Likewise, dual tibial grafts are superior for some conditions and should not be forgotten. Peg and key grafts from cortical bone also have much to recommend them and should not be abandoned.

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Retinal detachment following congenital cataract surgery

Bruce C. Taylor, MD; William S. Tasman, MD

Retinal detachment as a complication of congenital cataract surgery has been well known for many years. The findings and management of 32 patients seen during a ten-year period were studied. The patients were predominantly males and most were in the second or fifth decade of life. Surgery resulted in reattachment in 76% of the eyes, and as a group there was an improvement in visual acuity.

In 1934 Shapland presented a series of 22 patients seen for retinal detachment following needling of the lens.[1] Congenital cataract was the original pathologic finding in 18 of these 22 patients. Comparison of the frequency of needling operations at Shapland's institution near the turn of the century to the frequency of this type of retinal detachment in the 1930s established a 10.7% rate of detachment after needling of the lens.

Cordes, in 1957, reviewed 56 globes enucleated following congenital cataract surgery.[2] He noted 23 retinal detachments, more than half of which occurred following multiple needling procedures. Six globes contained vitreous bands extending between the anterior segment and the detached retina.

In the present study, consecutive charts of the Retina Service of the Wills Eye Hospital for the period between March 1962 and February 1972 were reviewed.

Results

Thirty-two out of 10,059 Retina Service patients had undergone surgery for congenital cataract, an incidence of 0.3%. These congenital cataract patients accounted for 50 of the approximately 6,200 reattachment procedures done, or 0.8% of all detachments treated surgically.

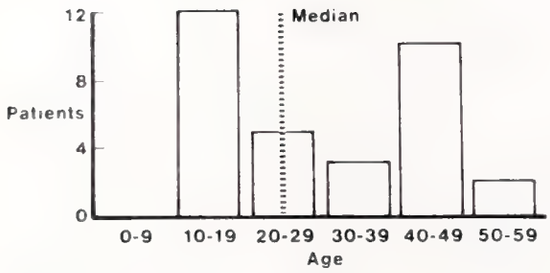
There were two major decades in which the detachments occurred, the second and fifth. Thus, there was a considerable age range with a median of 26.5 years (Fig 1). Five of the 32 patients, 15.6% of the total, were Negroes. This correlates well with the racial distribution of the mid-Atlantic urban population[3] (Fig 2).

The median age at which the patients had surgery for congenital cataracts was 6 years, and the range was 6 months to 18 years. Less than 10% of the patients were so treated in the first year of life (Fig 3).

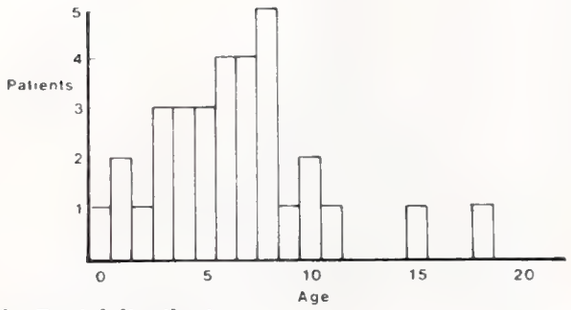
These patients represented congenital cataract surgery spanning 60 years of ophthalmic history (Fig 4). Thus, it was often difficult to ascertain the precise type of cataract surgery performed in the early years, but as recorded by Barkan in 1932, needling was then the most widely employed procedure.[4] In 20 of the more recent cases, linear extraction was employed more frequently (60%). However, since Scheie's report in 1960, discission and aspiration has been widely accepted,[5] and the last patient in the present series to have congenital cataract surgery underwent discission and aspiration.

Thirteen (41%) of the patients had associated ocular or systemic problems. These included epilepsy (four cases), mental retardation (three cases), prematurity (two cases) and Down's syndrome (one case). Ocular abnormalities included nystagmus (five cases), strabismus (two cases), myopia (two cases), and microcornea (one case).

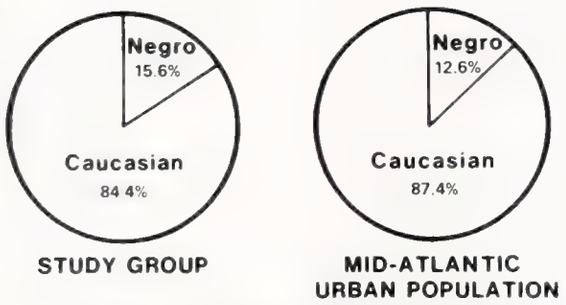
Seven of the 32 patients had a positive family history of congenital cataract. They constituted 21.9% of the total patient population, not dissimilar to the figure of 16-17.5% appearing in Falls' series of 131 children undergoing surgery for congenital cataract[6] (Fig 5).



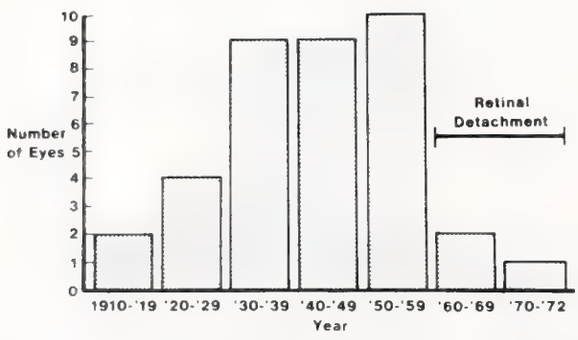
1. Onset of retinal detachment.



2. Racial distribution.



3. Age at time of cataract surgery.



4. Year of cataract surgery.

The interval between cataract surgery and retinal detachment varied between 21 days and 51 years, but the median interval was 21 years. Retinal detachment may precede surgery for congenital cataract, and this was noted in one patient not included in the present series.

At the time retinal detachment was diagnosed, the patient representing the median of 37 eyes was unable to see the 20/400 letter, although vision in the presence of retinal detachment in these patients ranged from 20/20 to light perception.

Twenty-one of 37 eyes (57%) exhibited an array of long-standing changes which for the most part served as a barrier in attempts to visualize the retina. These included lens remnants, corneal opacities and vitreous bands.

Information concerning the effective pupillary opening was available for 31 eyes. Enlargement of the pupil was deemed necessary in seven patients and was achieved by capsulotomy in six eyes and by photocoagulation of the iris in one. In the 11 instances where no retinal hole was found preoperatively, the median effective opening was only 3 mm.

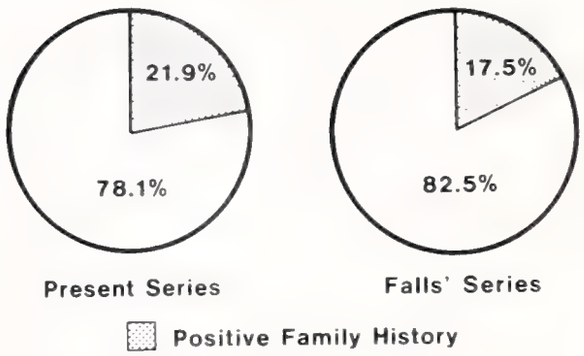
A total of 57 retinal breaks were identified. Of these, 47 were small, involving an arc of less than 10° of the periphery (Fig 6). Thirteen of the small breaks had a definite horseshoe configuration. Twenty-nine small breaks were seen in primary detachments (Fig 7). These were most commonly located in the superior quadrants. The 18 small breaks seen prior to reoperation were mainly in the inferior quadrant. The small breaks were located a median distance of 10 mm posterior to the limbus, and were thus for the most part anterior to the equator (Fig 8). Of the ten large breaks,

six were dialyses (Fig 6). These primarily involved the temporal half of the retina. Only one of the large breaks was an equatorial horseshoe tear.

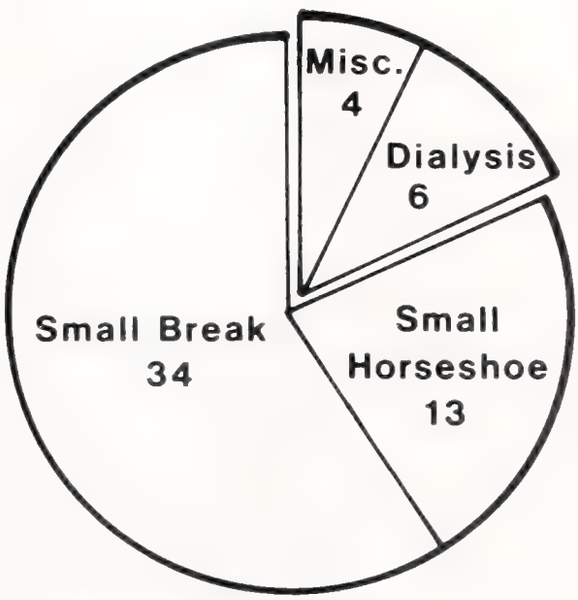
A total of 50 procedures for reattachment were performed. Thirty-three eyes in 28 patients were involved. A single operation was undertaken in 25 eyes, while five eyes (15%) required a second procedure and three eyes (9%) required three or more operations (Fig 9). Thus 24% of the eyes had one or more reoperations, and these reoperations accounted for 17 of the 50 procedures, or 34% of the surgery.

A solid silicone scleral implant with diathermy in the bed and an encircling band was used 44 times, or in 88% of cases (Fig 10). Full-thickness scleral diathermy without drainage was employed once for a flat detachment. An encircling no. 41 band with drainage and cryotherapy was used twice, and an encircling band with drainage alone was used once. Equatorial sponges with cryotherapy and drainage were used twice, once segmentally and once in an encircling fashion. Of the procedures other than diathermy with scleral implants, only the encircling sponge succeeded.

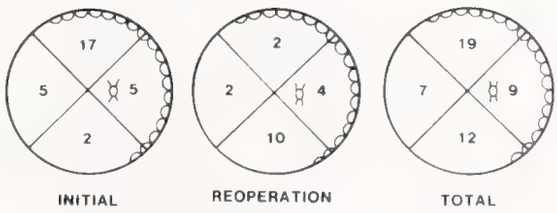
Complications during surgery included incarceration of the retina seven times (14%). Loss of vitreous occurred twice. Postoperative erosion of the encircling band, suture, or implant occurred eight times (16%) and massive vitreous retraction occurred four times (8%). Followup ranged from less than one month to 9½ years. Twenty-six, or 79%, of the eyes had a followup of six months or more following the last surgical procedure. Anatomic reattachment was achieved in 76% of the eyes, and the median preoperative vision of 20/600 overall was improved to a median of 20/200.



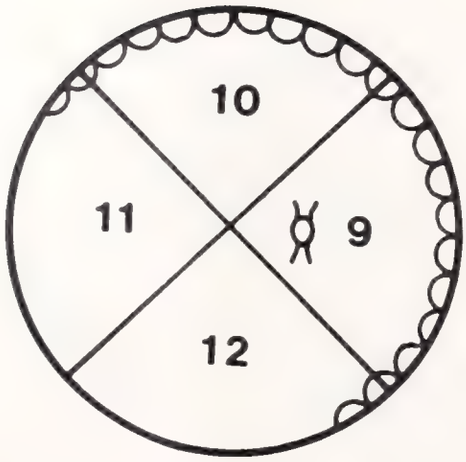
5. Family history.



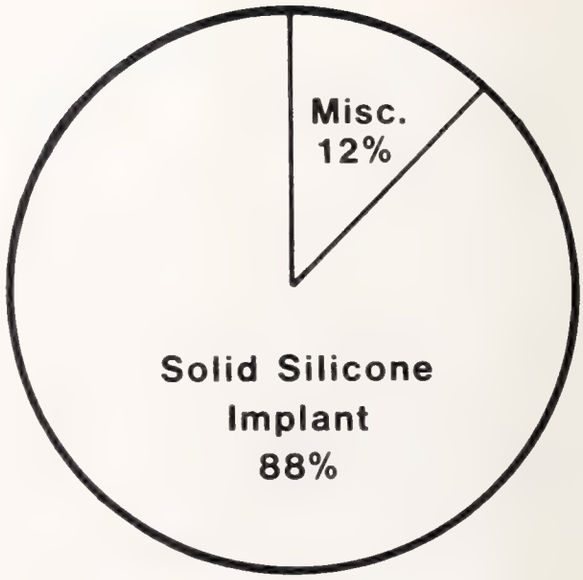
6. Types of breaks.



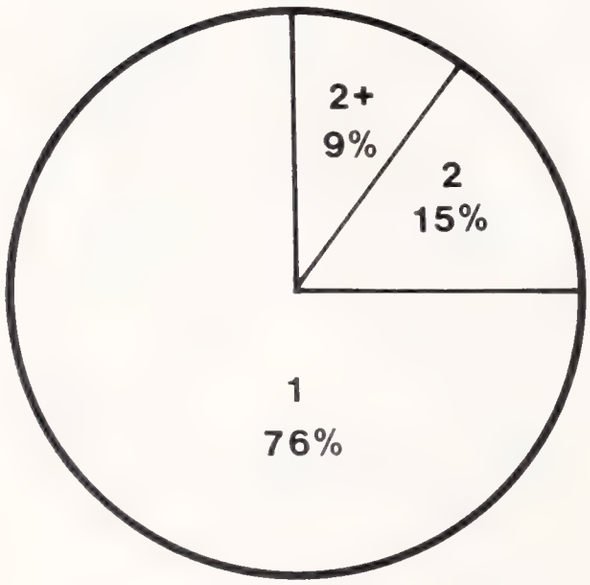
7. Location of small breaks by quadrant.



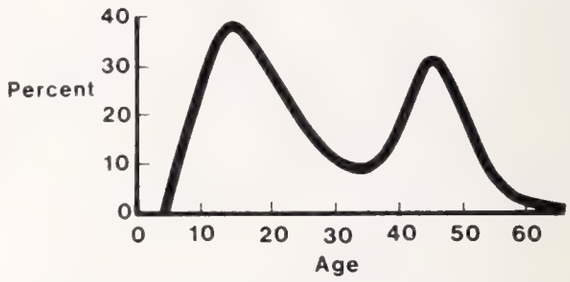
8. Location of small breaks by millimeter posterior to limbus.



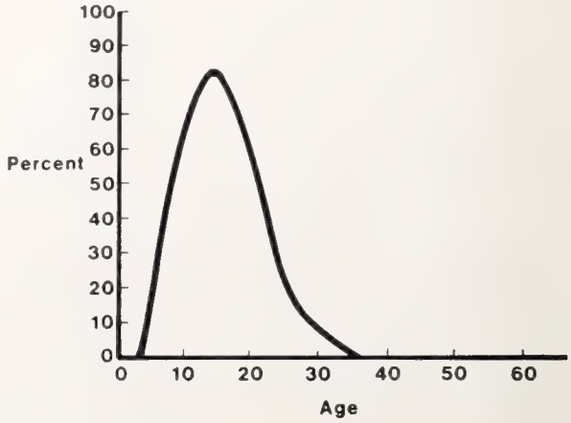
10. Type of reattachment procedures.



9. Reattachment procedures per eye.



11. Onset of retinal detachment. The ages of 32 patients have been subgrouped by decade. Each subgroup has been expressed as a percent of the whole series.



12. Dialysis in early detachment. Six patients with dialyses have been subgrouped by decade. Each subgroup has been expressed as a percent of the total number of dialyses.

Discussion

It is worthwhile to trace some of the recurring patterns within this group of patients. The bimodality of the age curve suggests that more than one factor is at play in causing the detachments (Fig 11). No single factor can account for all the patients in the second decade, although a large proportion of them do have dialyses, 42%. Most of the dialyses (83%) occurred in teen-agers (Fig 12). Fifty percent or more of the female patients or those with a positive family history or history of trauma were also teen-agers.

The ages of the patients having only small breaks identified are shown in Fig 13. These account for 100% of the patients in the fifth decade.

A male predominance (61.7%) was seen by Falls among patients undergoing congenital cataract surgery.[6] The figures of Schepens and Marden show a 58% male predominance among all retinal detachment patients[7] (Fig 14). Twenty-five (78.1%) of the patients with retinal detachment following surgery for congenital cataract were males. This is a statistically significant figure when compared with the data of Schepens and Marden, $p = .025$.[8]

Retinal detachment remains a discouraging complication of congenital cataract surgery. However, in a historical sense, definite progress can be measured. The present reattachment rate of 76% seems hopeful when compared to the series compiled nearly 40 years ago when not a single reattachment was achieved. Undoubtedly our increased success is related to better methods for identifying the retinal breaks.

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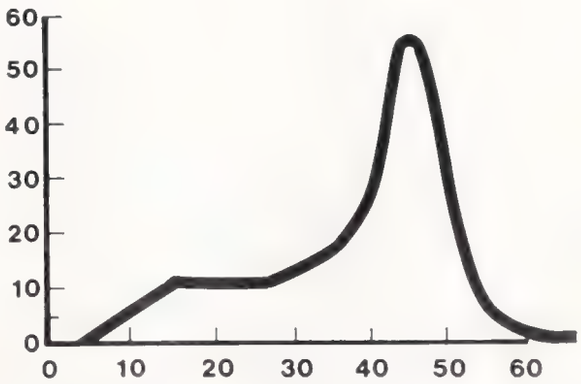
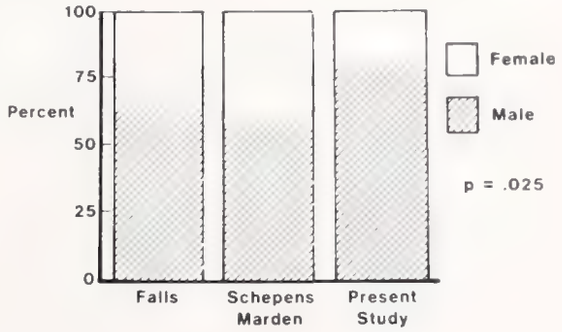


13. Late detachment, only small breaks identified. Eighteen patients with at least one small break and no large breaks have been subgrouped by decade. Each subgroup has been expressed as a percent of the total number of patients with only small breaks.



14. Male predominance.

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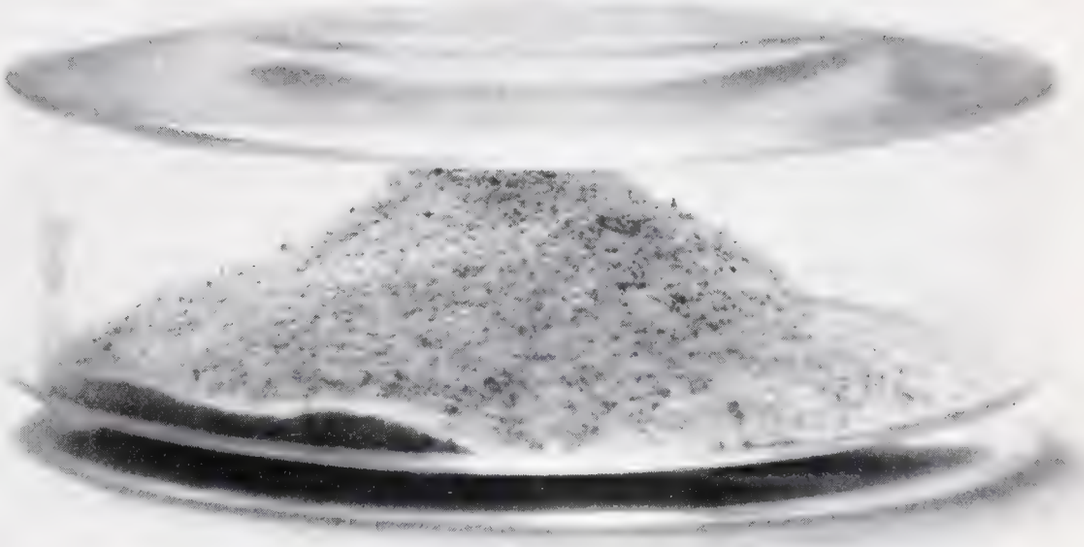

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Human myiasis as a complication of stasis dermatitis

James H. Herndon, Jr., MD; Joseph M. Glicksman, MD

Physicians in tropical and underdeveloped areas frequently encounter fly larvae in neglected wounds, but such infestations occur rarely in the United States. In this case, the patient became the host for at least two such organisms deposited on an area of oozing stasis dermatitis. Although the patient's experience proved to be benign and self-limited, the consternation it aroused in his physicians led to this report.

When a patient complains that "worms are crawling out of my skin" he may meet a skeptical or even suspicious response, but when he produces the captured evidence in a bottle the physician must put away his half-formed psychiatric diagnosis and take the matter seriously.

Report of a Case

A 66-year-old Caucasian farmer was hospitalized April 21, 1971, soon after erythematous bullae appeared on his hands, arms, and lower legs. A pruritic rash on the lower legs had troubled him repeatedly during the preceding four or five years, but blisters had never developed The patient denied taking drugs or inhaling chemical sprays, and had not suffered a recent infectious illness. On examining him, one of us (JMG) found on the palms, soles, and distal arms and legs numerous tense bullae containing clear to slightly hemorrhagic fluid. The examiner also noted erythematous nodules and plaques with traces of central purpura. Laboratory examination disclosed mild leukocytosis, 10,400 cells/cu mm with 33% eosinophils, findings compatible with the clinical diagnosis of erythema multiforme.

His bullae healed rapidly after prednisone, 60 mg daily, was administered orally, and Burow's solution was applied topically as an open moist compress. A rapid reduction in the dose of prednisone left the patient much improved at the time of discharge on the 11th hospital day. On reexamining the patient 12 days later, his physician noted exertional dyspnea, edema of the lower legs, and other signs of mild congestive heart failure for the first time. The patient complained that as edema accumulated in his legs, he had noted recurrent itching and had developed an erythematous weeping dermatitis from knees to ankles. The physician prescribed digitalis, furosemide, and topical care for the stasis dermatitis.

Six days later, 18 days after leaving the hospital, the patient returned for an unscheduled visit complaining excitedly of a "screwworm infection" on his legs. Earlier in the day he had felt pain and observed movement in two erythematous nodules near the left ankle. He produced a bottle containing two larvae, one of which is shown in Fig 1, that he had extracted from the swollen areas. On examining the affected areas the physician found two furuncular swellings, each of which exuded serosanguineous fluid from a central hole. One of these is shown in Fig 2. No other similar nodules could be found. The dermatitis of his lower legs had improved considerably. A white blood cell count disclosed only 6,400 cells/cu mm with 3% eosinophils.

On further questioning, the patient recalled that since leaving the hospital he had spent several hours each day sitting on an unscreened porch. Many large flies had buzzed about him continually, apparently attracted by animal excreta nearby. He occasionally had fallen asleep in the warm sun.

Dr. Donald V. Moore, assistant professor of microbiology at the University of

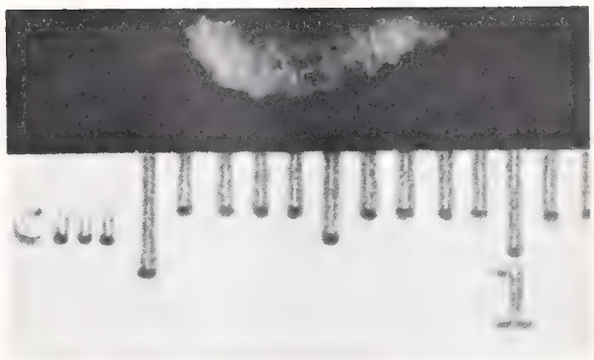
Texas Southwestern Medical School at Dallas, identified the larvae as members of the genus *Sarcophaga*.

Comment

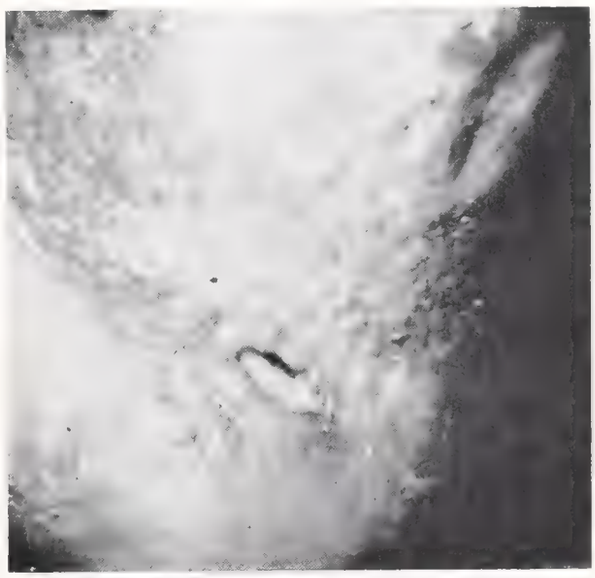
Flesh flies of the genus *Sarcophaga* breed in feces and other organic debris often found near human dwellings in a world-wide distribution. Parasitologists have long recognized that they may invade animal, or less often, human, skin as opportunistic agents of myiasis, their larvae developing in wounds or other breaches in the epidermis. The semispecific parasites found in our patient usually produce only one or a few nodules. These organisms usually choose decaying organic matter, but may develop in living tissues under favorable conditions. This benign behavior contrasts strikingly with that of the specific myiasis-producing genera whose larvae can develop only in living flesh; these may cause numerous and perhaps disabling lesions in man and/or animals.

A knowledge of the parasite's life cycle was helpful in understanding our patient's course. The young *Sarcophaga* larvae grow rapidly passing through three stages or instars in from four to eight days.[1] Next they emerge into the open, pupate, and develop into adults in four to eight more days. Ambient temperature influences the rate at which the cycle proceeds; in warm weather the adults emerge more quickly.

Knowing that mature larvae develop within eight days of oviposition, and that they were found on the patient's legs 18 days after he was discharged, we suggest that his infestation began 10 to 12 days after he left the hospital, probably during the period in which congestive heart failure and dependent edema were developing. In any event the larvae apparently could not



1. Sarcophaga *species larva removed from the area of stasis dermatitis.*



2. A tract left after removing the larva from a swelling near the left ankle.

have influenced his attack of erythema multiforme.

If at all possible, the physician should obtain a parasitologist's help in identifying larval specimens recovered from patients with myiasis. Although the gross appearance of the parasite is not always sufficient for identification, the specimen should be preserved in a way that will allow accurate morphologic diagnosis. If only a few specimens are available, they should be placed in 30% alcohol and slowly brought to a boil. Then heating should be stopped and the specimens allowed to cool in the alcohol. Next they should be placed in 70-80% alcohol and sent to the microbiologist in a sealed container. If many larvae are available, more specific information will be gained if some are placed on meat and raised to adulthood.[2]

As exemplified by our patient, the cutaneous lesion begins as a painful, indurated nodule on an exposed surface. The larva soon creates a central defect or pore containing a small amount of bloody fluid through which it periodically extends its posterior respiratory openings. This intermittent snorkeling behavior, together with the pain caused by its wriggling motion, alarms the patient, who presents himself for treatment. Experienced physicians recommend infiltrating the area with a local anesthetic first, in order to blunt both the patient's discomfort and the parasite's efforts to escape. Then the intact larva may be removed with forceps. Healing usually follows promptly after complete removal of the parasite.

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Initial responses to grief
The physician's problems & opportunities

Rev. Robert E. Buxbaum, STM, ACSW

Death is personal, part of the universal human experience, and anxiety provoking. Death, dying, loss, and grief have been or will be part of every man's lot in life. This means that there are no detached, objective investigators of the subject. At best, we can only hope to be "participant observers" and, to do even this, we must begin by acknowledging our personal emotional involvement with the subject. Discussion of anyone's death stimulates our anxieties and feelings about our own death.

Grief is, after all, the natural and normal human process by which we cope with death and loss through the expression of our emotions. In the grief process, we are enabled to disengage ourselves from our deep emotional investment in the deceased. Grief work is the process through which we free ourselves from the past in order to reinvest our emotional resources in current living and productive relationships. If the grief process is thwarted or suppressed, we remain overinvested in the past and dead. Without grief, our emotional lives may become increasingly pathological as our interpersonal relationships become stunted and distorted. Hence, the therapeutic management of normal grief always aims at encouraging the freest possible expression of thoughts and feelings.

Unfortunately, most of us tend to reflect cultural biases against open and frank discussion of human feelings, particularly those aroused by the subject of death. Death is one of the few subjects that still cannot be discussed freely in a social setting. It is the new pornography. Giving expression to our avoidance of death, the hospital, as a social system, has been conceptualized as an institution that limits and manages our awareness of dying.[1] Increasingly it has become the "proper" place for people who are about to die. While the institution thus shields most people from an awareness of death, the hospital's personnel must defend against their own anxieties.[2] The culture discourages the free communication of personal information that may provoke anxiety. No wonder then that the essential message received by deeply grieving persons is, "Don't feel what you are feeling, and if you have to feel it—for God's sake, don't make us anxious by telling us about it!"

No professional group can be singled out as *the* one that has problems in facing the anxiety aroused by death, loss, and grief. Although the public may believe that physicians, hospital personnel, or the clergy can deal with these problems without having to manage their own anxieties, it simply is not true. Our patients and our fellow professionals will be better served if we do not try to maintain this illusion.

The clergyman has to deal with as many personal complications in handling grief as anyone else. Religious ritual can be a barrier to closeness and a defense against anxiety. One psychiatrist[3] has suggested that part of the motivational drive for the vocational choice of medicine may be an unconscious attempt to deny anxieties aroused by death. A psychologist offers a study that indicates that physicians tend to deal with death by developing counterphobic maneuvers, and that they tend to exhibit higher anxiety levels concerning death than either control groups of hospitalized patients or normal nonhospitalized subjects.[4] The same is certainly true of clergymen. I was once accompanied by a seminarian in clinical training to visit a patient who had just been placed on the hospital's "critical list." As soon as we entered the room, the seminarian closed his eyes and assumed the attitude of prayer. Later, I asked him what was happening at that mo-

ment. He told me that he was offering the traditional prayer that begins, "Depart, O Christian soul, out of this world . . ."[5] Only then did he realize that his prayer had come from an unconscious wish that the anxiety that he was experiencing might be relieved by the patient's death. To the extent that we can admit the commonality of these kinds of anxieties, we can utilize our recognition of them as a way of gaining some measure of control over them.

Despite our professional training, we are not exempted from being vulnerable to human problems. If we are to offer ourselves as resources to those experiencing grief, we must make conscious those personal experiences and feelings which are part of our individual reactions to death and loss. This will assist us in keeping our therapeutic response focused on the patient's needs.

One of the ways in which the physician's response sometimes signals that he has lost his focus on the patient's need is when he aggressively intervenes in the grief process with medication. Increasingly, the culture supports the use of tranquilizers as an escape from experiencing uncomfortable feelings and as an alternative to the effort to resolve them through exploration and expression. The tranquilizer can be used as a mode of pharmacological control which, both symbolically and in fact, enforces the repression of feelings that make others anxious. This utilization of drugs is offered as a substitute for, rather than as an adjunct to, therapeutic assistance.

Consider the 42-year-old widow whose husband died of a heart attack while playing golf. Her behavior before, during, and immediately after the funeral was so highly controlled that she was lauded for her personal strength, bravery, and faith. About three months after the funeral, her behavior became erratic, explosive, and confusing to both herself and to others. During the first counseling session, we discovered that the source of her emotional control had not been her faith, but rather massive doses of medication administered by her family physician. Significantly, the reason that he offered her family for the large dosages of medication had been that he "didn't want to see her get upset." I assume this to have been literally true; that he did not want to see her upset. The fact was that the patient was furious at her husband. He had died while playing golf, and the amount of time he had devoted to that game had frequently led to marital conflict; the patient always felt that he preferred not to be with her. She was outraged at being abandoned by him, for in her inner world, his death was a repetition of the trauma she had experienced at age 7 when her father died. She needed to express the feelings which had been pharmacologically repressed, acknowledge her rage, and understand her emotional reactions to the deaths of both her husband and her father. It is well within the normal limits of grief for a person to become upset and to express a wide variety of emotions, including anger toward the deceased. The patient must be given the opportunity to grieve; psychotropic drugs should be prescribed only after careful consideration. Their prescription should not be a reflection of our need to avoid the discomfort and anxiety aroused by the feelings which attend the death experience. If the physician cannot tolerate his patient's emotional distress, then he should find someone who is prepared to do so, and place the patient in their care.

The physician does not need to abdicate his medical role and assume the role of psychotherapist in order to be helpful to people in grief. During the regular course of his medical practice, there are at least

six specific elements in his initial responses to patients which can be of substantial positive value. First, he can recognize that how he responds to the relatives of a patient who has just died is crucial. He has a role to play in the successful resolution of their grief, even when he will not be the one who sees them through their grief work. During terminal illness, the patient's dependency necessitates that the physician be vested with considerable authority and trust. Therefore, anything that the physician says or does that helps the relatives accept their feelings as natural and normal responses will encourage them toward a resolution of their emotional distress. His recognition of their need to discuss their feelings may constitute the permission they need to share their grief.

Second, the physician can be helpful by utilizing a vocabulary that clearly establishes and confirms reality. Our choice of vocabulary is almost always a significant clue to our feelings. It is important to the bereaved that the physician use straightforward language in establishing the reality of the situation. Euphemisms for death are seldom kind to those who have to accept the fact that a loved one is now dead. It is highly significant that our custom is to speak of the physician as being called upon to *pronounce* the patient dead. Emotionally, as well as legally and medically, these words need to be said by him. The openness of his verbalization can firmly establish the fact of death; an acceptance of which is the first step in healthy grief.

Third, the physician can help facilitate the grief process by limiting himself to explanations that are medical. Death is the terminal reality in the natural working out of the human life process. It is generally unhelpful to attribute the reason for death to God. In the angry phases of their grief work, many people will develop hostility toward God for depriving them of their loved one. As one teen-ager bitterly complained: "They say that God took him! What the hell kind of God is that? Didn't He know how much I needed Dad?" In the grief process, this kind of angry verbalization can have a positive cathartic effect and is not to be discouraged. However, it should not be reinforced by assertions that the death of a loved one *was* God's will. At best, that's a highly questionable theological accusation, and, at worst, it is a soporific that encourages the repression of feelings by promoting guilt. The real message behind this assertion is that since it's God's will, you've no right to feel badly about it. To do so would be to stand in opposition to the will of the Almighty. The physician alone is qualified to tell us *how* a person has died. He should not give up this important task for theological speculation.

Fourth, the physician can suggest to those who grieve that they can expect that it will take some months for them to overcome their sorrow, and that they should not be unduly alarmed when these feelings are periodically resurgent. Even when grief work proceeds without external hindrance, the initial reaction may be followed by a two- to four-month period during which the emotional anguish seems to subside. Then, in the fifth to seventh months after the death, when grief feelings reemerge, the bereaved may be puzzled or even frightened. "I thought I was doing so well," they may say, "but now I'm afraid I'll never get over it." It is during the first stage of this latter period that psychosomatic complaints become common. It is then that fears concerning the loss of sanity, suicidal thoughts, and an obsessive preoccupation with death and/or the deceased, may occur. If the patient has been forewarned that

his distressing feelings may reappear during the fifth through seventh months, and that he can be helped by talking them out with someone at that time, he may be enabled to seek and accept the help that is available to him. A brief comment to the effect that these feelings will come and go during the months ahead, may establish a temporal frame of reference by which the grieved can begin to see himself as being engaged in the ebb and flow of a process which normally spans a period of time.

Fifth, it is important for the physician to realize that children will also have grief work to do. A brief reference to this can help sensitize the appropriate adults to the fact that the children will be experiencing loss, have a legitimate need to grieve, and can usually benefit by being included in the family's grief activities.[6] All too frequently, it is assumed that children should be shielded from this important crisis in the family's life. When they are, they proceed toward adulthood without the positive preparation for dealing with the fact of death and feelings of grief that they could have had if they had been included. When someone dies, children are sometimes shunted off to stay with distant relatives or neighbors. They are excluded from the funeral and frequently are discouraged from asking questions; often they are told that to ask questions would upset some adult. By attempting to shield children in these ways, we teach them that death and grief are solitary, emotionally overwhelming, and unbearably distressing experiences that cannot be discussed even with those closest to us. Of course, our attempts to protect children from the realities of life by prohibiting inquiry are always self-defeating. The operations of the human mind are such that when we do not have an explanation for something, we tend to make one up. Frequently the resulting fantasy is drawn from our worst imaginings, and our fabricated explanation is worse than the truth. One patient concluded, after being kept apart from her grieving father at the time of her mother's death, that she was being punished. In moments of anger she had wished her mother dead, and feared that her wishes had caused the death. Her isolation from the other members of her grieving family was interpreted as a confirmation of her culpability. On the other hand, when children participate in the family's grief work, they are helped to accept and manage their own feelings, the family is established as a source of mutual assistance, and they are better prepared to deal with adult realities. One of my more rewarding pastoral experiences was a conversation with a 12-year-old boy the day after his father's death. As we walked together along the railroad tracks behind his grandparents' house, we talked of many things, threw stones at telegraph poles, and in reviewing his memories, he began to get ready for his new life. When a child who has been excluded from the family's grief work develops psychosomatic symptoms or shows changes in his academic and social interests, the physician should be alert to the possibility that the etiology of the problems may be found in his unresolved grief. Many adults, because of their lack of understanding or their own anxieties and distresses, are not aware of their children's emotional needs. The physician can alert the family to these needs and, when a parent cannot help his children express their grief, the physician can help by suggesting someone who can.

Finally, the physician can help the bereaved by acknowledging the fact that sometimes people need help to work through their feelings. He can let them

know that should they desire it, help is available. In communicating to them that their feelings are understandable, he can establish himself as a future resource for referral. Although a growing number of clergymen are clinically sophisticated in their understanding of grief and grief work, the physician should not assume that this is always true. Not long ago, I was aghast to hear a clergyman tell a congregation gathered for a funeral that it is a sin for a Christian to grieve. He was not only emotionally destructive, but also a poor Biblical theologian. "Blessed are those who mourn, for they shall be comforted."[7] It is in mourning, through the process of grief, that comfort ultimately comes. Therefore, the physician who wishes to be helpful to those who grieve will make it his business to know professionals who are personally and clinically prepared to serve the function of grief therapist.

Grief and loss are not exclusively "medical problems" even though they are appropriately a medical concern. To appropriate them as such would be, at best, an illustration of professional imperialism and, at worst, result in depriving the bereaved of much needed resources for assistance. Grief is not sickness; it is a healthy emotional process. Several professions frequently are helpful to those who grieve; one of these professions is medicine. To conceptualize grief as a "medical problem" is unhelpful because it isolates the physician from his professional colleagues in an area where cooperation and mutual assistance can benefit total patient care. To call grief a "medical problem" would lay upon the physician an enormous demand for the kind of counseling services that he may not have either the time, personal resources, nor the specialized training to meet. Finally, it would tend to force some physicians into a deeper involvement with an emotional area that exacerbates their own anxieties. It is appropriate that our concern for those who suffer from grief and loss be expressed in a broad interdisciplinary dialogue and effort. The physician can increase his contribution to patient care by becoming aware of the effect that his own emotional involvements have upon his professional functioning, by honing his initial communications with the bereaved so that he encourages their grief work, and serving as the channel through which additional competent professional help can be obtained.

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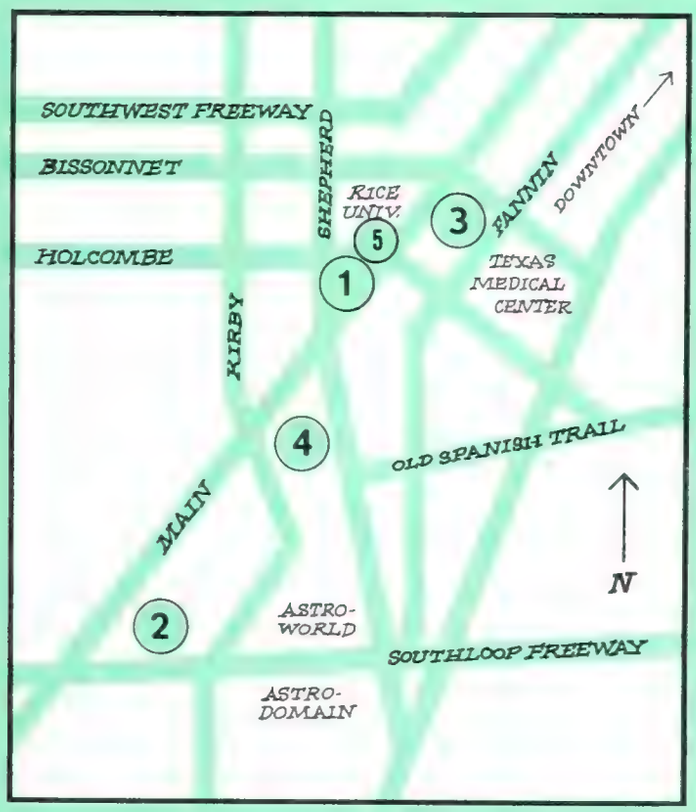

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   Edward T. Krementz, M.D.
   New Orleans, Louisiana

6. HYPERTENSION
   William L. Morgan, Jr., M.D.
   Rochester, New York

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    W. G. Johanson, Jr., M.D., Dallas, Texas, Moderator; Kevin M. McIntyre, M.D., Boston, Massachusetts; Wil B. Nelp, M.D., Seattle, Washintgon; Richard D. Sautter, M.D., Marshfield, Wisconsin

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Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

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All material is subject to *editing*, but authors receive typescripts to check before publication. Prompt return of typescripts to *Texas Medicine* office avoids delay in publication. After the article is sent to the printer, only minimal revision may be made.

Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Editorials should be prepared in the same general manner, and should be written in clear, concise language. They should be 300-500 words in length (about two to three pages typed with double spacing.)

Contributions to the news section should be sent to the Editorial Offices, 1801 N. Lamar Blvd., Austin 78701, by the 5th of the month preceding the month of publication.

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Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

What's on your patient's face...

may be more important than his chief complaint

Patient P.T.* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electrosurgical procedures.

Patient P.T.* seen on 6/12/67, seven weeks after discontinuation of 5% FU cream. Reaction has subsided. Residual scarring not seen except that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.

*Data on file, Hoffmann-La Roche Inc., Nutley, N.J

The lesions on his face are solar/actinic— so-called "senile" keratoses... and they may be premalignant.

Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics. The typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.

Sequence of therapy— selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; this reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

Acceptable results

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

This patient's lesions were resolved with Efudex® fluorouracil/Roche®

5% cream/solution...a Roche exclusive

Texas Medical Association
Annual Session
Houston, May 9-12, 1974

An artistic adventure or if you smell smoke, it's probably just your shirt-tail

Sam Jagoda, Jr, MD

On Halloween eve of 1962, after planning my trick-or-treat route for the next night, I rested; and, after re-reading my favorite journal, *Texas Medicine*, for the eighth time I turned to another stack of reading material. On top was a catalogue of sculpture from a gallery in Gotham. Prominent on page one was a welded scrap iron owl at 1500 hard pre-inflation 1962 dollars. It weighed 50 pounds, which works out to around $20 an ounce, less than gold, and a little more than x-ray film. "My gracious!" I exclaimed, and decided that it was the welder's life for me.

Now, my colleagues, I have, like many of you, been through 22 hobbies ranging from collecting stamps and matchbook covers to cataloging the non-poisonous mushrooms of Tarrant County; but I knew that this hobby was going to be something special.

I began to seek out the company of professional welders, and finally found one with enough patience to teach a pupil with very little aptitude. And so it was "Don the welder," the Denton Cooley of Fort Worth welders, who taught me the rudiments of the craft in his atelier off South Main Street that early winter of 1962.

It was then necessary to find raw materials. Now there are two types of scrap yards. In one there are the terrible ruins of the industrial revolution . . . huge broken steel things that once fashioned oil field equipment and the like. These are not artistic on my scale. The other scrap yards are family operations that hold each little scrap of iron dear, and are eager to help you find a part for your owl or flower. Some of my happiest memories are of carefree hours, covered with grime and rust, seeking the elusive muse in these "boutique" scrap yards.

The author, Dr. Jagoda, poses with one of his own artistic creations.

Early works

In those early days I found the beginnings of many art works and just welded them together until they looked a little like a dog, bird, or flower. Sometimes the finished work could not be distinguished from either the animal or vegetable kingdom. It is then that the mettle of the artist is tested, and he learns the art of bluffing. You must put a title on these monstrosities that makes them acceptable to the local art set . . . a name such as "Composition in Gray" or "Diskinetic Monochromism." This ruse will get you by until you can construct something that is recognizable. Later, an occasional fanciful name is permissible. One of these was a lopsided copy of a telephone which was hollow and had a clapper in the

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Editor's note: The author is the self-acclaimed "Junque artist of Fort Worth." A graduate of Baylor College of Medicine, Dr. Jagoda has practiced radiology in Fort Worth since 1960. This article is the first of several to appear this year on physicians' hobbies.

Original Jagoda works range from the abstract to the delicate and exact.

A torch, some steel, and imagination are a metal sculptor's tools.

Every Texan knows an armadillo when he sees one.

Dr. Jagoda finds welding both relaxing and practical.

A "prize catch" from a local scrap yard is the welder's goal.

An artistic eye see beauty even in junk.

Animals and plants are popular subjects for scrap iron art.

base. When you picked it up it sort of made a dull dissonant ding-dong sound. I called it "Alexander Graham's Bell." Other titles could be traced to their origins, such as the series of automobile part flowers titled "Dodge Daffodil," "Ford Phlox," and "Chrysler Chrysanthemum."

After several years of fanciful art forms I felt I needed the approval of the Serious Art Colony. I tried to improve my image by buying a corduroy suit and going to all the gallery openings. This didn't work . . . they can always spot a phony. I then began to try to make pretty birds, animals, and flowers, which is not easy when you don't have much talent; but I persevered, and in a few years, and a few trips to the burn centers, I got to where I could make a passable sculpture.

When word gets around that you are producing stuff that looks presentable you start getting invited to show your work at women's meetings. The probable reason for this is that, with dozens of ladies organizations meeting each month, the number of available speakers gets used up quickly.

The rounds of meetings

My first appearance was at the Lawyers' Wives Club. This was a memorable show in that many of the wives knew more about welded scrap iron art than I did. Later, and probably the high spot of my shows, I was asked to show at the meeting of the Tarrant County Medical Auxiliary. After the show they made me an honorary doctor's wife.

A local college asked me to fill some display cases in the student center with my creations. I was honored and delighted until I found out that the display period corresponded with the Thanksgiving and Christmas vacations.

My bank asked me to put a show in their

lobby one August. Their public relations man explained that very few people visited the bank in August anyway. In a few weeks, their chief competitor bank across town experienced a growth spurt that is probably due to my show.
Since no one would buy the stuff, and my house was sinking into the ground, I started giving some pieces to charity auctions. This raised tremendous sums for the needy—such as $2.03, $4.20, and once 89c. I might point out that these pieces are now worth twice that much.

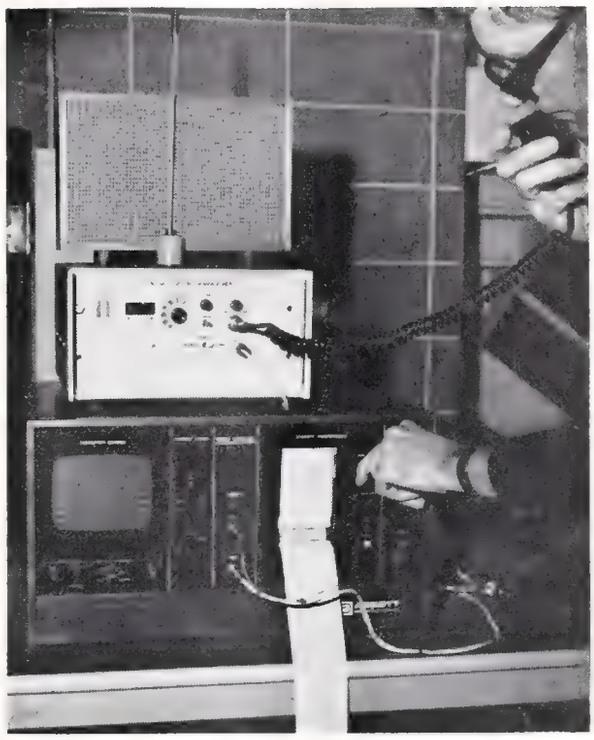
A lift from the press

Notoriety came from George Dolan, the dean of north Texas journalists, and a daily columnist for the *Fort Worth Star-Telegram*. He was amused by the snail-like pace of my rise to fame, and, by writing about my struggles, he increased my pace to that of a tortoise.
I started showing pieces in an art gallery and sold a fair number on Christmas Eve when people are desperate and will buy anything.
But now, by sheer volume of production over the years, I have stuff all over—from Paris to Rome (Texas). Not everyone is as delighted at owning an original Jagoda as I have been in making them.
So there in lies the tale, dear colleagues. If the spark (no pun intended) of creativity is in you, get a torch and some steel and go to it. Welding supply stores will help you; they are a nice group. It is a hobby which you can use in a practical as well as a relaxing way, and, if you get called to the emergency room, you can stop easily and pick up at that point when you get back. There is no problem stopping and cleaning up as with oils or ceramics. The tools are relatively inexpensive and available everywhere, and scrap steel and iron is only 5c a pound.
So . . . pick up your torches and weld, America. You have nothing to lose but your epidermis.

Ready for work behind the welder's mask is Dr. Jagoda.

Telemetry increases scope of Houston's emergency services

4500 emergency calls per month.
Over 75% of these are sick and injured persons actually transported.
Time from initial call to being on the scene—5.4 minutes.
Time from initial call to being at the hospital emergency room—21 minutes.
Yet, included in this outstanding record of operational emergency medical services, Houston has 500 cardiac calls each month.
Physicians and city officials thus set about to make further improvements on their emergency system. Just installed is a new telemetry system which is expected to save 40% of the cardiac patients and will also greatly improve the trauma cases being handled.
Four ambulances are currently using the new equipment which enables doctors at Houston's Ben Taub Hospital to monitor a patient's condition during the ride to the emergency room. The system is expected to be fully operational in six months.
The new phase of emergency services involves advanced Emergency Medical Technicians (EMTs) starting IVs, giving selected drugs, and performing cardiac defibrillation in the field. According to Texas law, this has to be done on direct order of a physician. Thus, the program has necessitated advanced training, advanced equipment, more elaborate communications, and telemetry of biomedical data.
This improved service is the latest innovation in an extensive emergency medical system which began operation in Houston in April 1971 through the coordinated efforts of the Harris County Medical Society, the Houston Fire Department, the city health department, the local hospitals, and city officials.
In undertaking this phase, several specific problems confronted the Houston emergency system planners. The solution of these and subsequent developments provide valuable guidelines and information to other communities developing similar emergency care services.



The physician monitored base station unit allows the physician to order immediate life saving procedures on visual displays and backed by audio contact with the EMT on the scene.

EMT training

The first problem was the advanced training of the EMTs. The consensus of the Houston planners was that the 480 hours of training suggested by the Dunlap report on emergency ambulance services in the United States was too long. Other communities that had on-going advanced programs agreed with this premise. Therefore, a joint committee of the Harris County Medical Society and the city health department wrote a 200 hour course to be presented in five weeks. Included was some basic review, exposure to animal laboratories, and necropsy observation. The bulk of the course is in-hospital training.
The health department pursued the footwork of course outline, hospital agreements, necropsy arrangements, and training equipment purchases.
Agreements for in-hospital training for 40

Editor's Note: This article was prepared with the assistance of the Harris County Medical Society. More information regarding emergency services in the state is included in this issue in the editorial by Dr. Robert L. Donald.

Dr. William H. Kolter, a member of the Harris County Medical Society's Emergency Medical Care Committee is shown checking one of the prototypes of the suitcase "Telecare" units.

hours were obtained from the six major hospitals involved in the teaching services of Baylor College of Medicine and The University of Texas Medical School at Houston, as well as 18 suburban hospitals. The medical staff, nursing division and administration in each hospital were eager to take part in the pioneering project of advanced EMT training.

Funding and equipment

The next area to be tackled was funding. The Houston program has been unique among large cities in that it has been self-funded. No federal, state or foundation funds have ever been used. The initial approach to the city council was made with an estimated total cost of $100,000. The city council said if lives could be saved, the city would fund it. So the planning continued.

Equipment posed a third problem. In the program already underway, one of the major problems was bulky equipment. In each ambulance was a 30 pound defibrillator, a bulky communications suitcase, a drug kit, oxygen bottles, and an equipment suitcase. Members of the medical society envisioned a solitary suitcase weighing 30 to 40 pounds containing everything. Most major manufacturers told them it couldn't be done. They also wanted the capabilities of duplexing and multiplexing, thus enabling the EMT and the physician to talk to each other (simultaneously on different frequencies). With biomedical transmission being sent simultaneously on the same frequency being used by the EMT, this would avoid interruption of voice communication in order to transmit EKG data. Again they were told it couldn't be done. But a similar request had come from NASA and it seemed that the answer had been found.

A new problem was one of miniaturization and packaging. SCI, Inc., of Houston said they could do it. NASA reviewed the specifications and agreed in principle to the concept. But the cost was $500,000. It was back to City Hall; the mayor and the city council agreed, and funding was assured.

Final specifications were written by the fire department's communications expert and modifications were made by the medical society's biomedical communications consultant. Bids were let by the city and SCI submitted the winning bid.

The new defibrillator was unique in that it

weighed only eight pounds. However, a different wave form was being used, so there was the problem of knowing whether the defibrillator really worked. The Department of Medicine at Baylor College of Medicine agreed to test the new defibrillator. After several weeks, their evaluation showed it was probably one of the best defibrillators on the market today. The contract was let.

Another dimension to the expanded service demanded that a physician man the training console 24 hours a day, seven days a week. The Department of Medicine at Baylor also accepted this challenge. Residents at Ben Taub Hospital would have a tour on the central console after they had rotated through the emergency and cardiology departments. An advanced EMT monitors the console and a physician interprets the data, both telemetered and from the field EMT, makes medical judgments, and directs treatment until the patient arrives at the designated hospital where the local physician takes over. This treatment is monitored by backup cardiologists on the medical school staff and by selected physicians to insure quality control.

In order to facilitate training of both the advanced EMT and the emergency physician, a training console was purchased and donated to the city by the Houston chapter of the American Heart Association.

With these steps completed, it was decided to phase into operation four units at a time. All 24 units will be in operation in the next six month period covering the city with an

Dr. Lowell Baker (second from right), acting director of emergency medical services for the City of Houston Health Department, instructs members of the first class of advanced emergency medical technicians on the use of defibrillating equipment included in the portable telemetry pack.

Veteran EMTs from the Houston Fire Department are shown undergoing part of an additional 200 hours of advanced training to equip them to utilize the advanced communications equipment.

Ambulance units of the Houston Fire Department are equipped to provide advanced emergency medical care.

advanced emergency medical services system.

The FCC license for the UHF telemetry channels was granted to the Houston Fire Department to implement the pilot program in Houston, but eventually will serve the entire region.

During the past several months, other aspects have been developing in the Houston system. A joint committee of the medical society and the Greater Houston Hospital Council went to work on the recategorization of hospital emergency departments. The new plan is based on the AMA Commission on Emergency Medical Services' booklet on the subject, using a four category system instead of the three category system Houston already had in effect.

Another spoke in the system's wheel was added by utilizing HAHERN (Houston Area Hospital Emergency Radio Network). Impetus was added in extending this to all receiving hospitals by the emergency ambulances installing this radio equipment. This provided a communications link between the ambulance and the physician in the emergency department to which the patient was being taken. In addition, a dual EMT-physician link was established. It could not only be used on a routine basis, but also as a backup mechanism. A future step will be the installation of slave oscilloscopes and speakers in major receiving hospitals to enable the physician in the emergency department to monitor the treatment in the ambulance. When the patient arrives at the hospital, a lengthy consultation will not be necessary.

Houston area health planners are continuing to look ahead with plans for expansion into the surrounding areas, including satellite communities, airports, and the ship channel. In a few short years the city has advanced from, perhaps, a non-system to one of the best systems for emergency medical care.

MEDICINE AND THE LAW

CHANGES IN WORKMEN'S COMPENSATION LAW

With the passage of Senate Bill 283 in the 63rd Session of the Texas Legislature, effective Sept 1, 1973 (Art. 8306-8309 a, V.A.T.S.), several important changes were made in the Texas Workmen's Compensation Law and Industrial Accident Board (IAB) rules that will have an effect upon Texas physicians' treatment of injured workmen covered by the law.

Section 5.151 of the IAB rules adopted to implement SB 283 states:

> The treating physician or chiropractor will forward to the Industrial Accident Board, to the insurance carrier, and to the claimant or his representative, all reports covering the nature and extent of injury, treatment and diagnosis. If the Board finds that a physician or chiropractor has failed to comply with Article 8306, Section 7, his bill for services may be rejected, and following Board rejection, neither the carrier nor the claimant will be held responsible for same.

This rule provides that physicians treating injured workmen shall make reports relating to the nature and extent of injury, treatment and diagnosis. Copies of these reports are to be furnished to the IAB, the insurance carrier, and the injured workman or his representative. This represents a departure from past practice in view of the fact that the injured workman will be given a copy of all reports relating to his injuries.

Section 5.152 of the IAB rules states:

> It is the policy of the Board that the following provisions of Article 8306, Section 7, R.C.S. be observed at all times with due respect to the rights of all parties: "The employee shall have the sole right to select or choose the persons or facilities to furnish medical aid, chiropractic services, hospital services, and nursing and the association shall be obligated for same or, alternatively, at the employee's option, the association shall furnish such medical aid, hospital services, nursing, chiropractic services and medicines as may reasonably be required at the time of the injury and at any time thereafter to cure and relieve from the effects naturally resulting from the injury. Such treatment shall include treatments necessary to physical rehabilitation, including proper fitting and training in the use of prosthetic appliances, for such period as the nature of the injury may require or as necessary to reasonably restore the employee to his normal level of physical capacity or as necessary to give reasonable relief from pain, but shall not include any other phase of vocational rehabilitation. The obligation of the association to be responsible for hospital services as herein provided shall not be held to include any obligation on the part of the association to pay for a medical, nursing or surgical services not ordinarily provided by hospitals as a part of their services." IN ADMINISTERING THE ABOVE QUOTED STATUTE, THE BOARD WILL ADHERE TO THE CONCEPT OF REASONABLENESS.

Therefore it can be seen that for the first time under the law the injured workman will have a freedom of choice in his physician. This is consistent with the TMA's position.

Section 11.033 of the IAB rule states:

> The treating physician or chiropractor shall furnish to the Board, to the carrier and to the injured workman or his representative, an *initial report* as soon as practical, identifying the *injured workman*, and stating the *nature and extent of injury*. Thereafter, any physician rendering medical care or any chiropractor rendering chiropractic care shall make *subsequent reports* as are reasonably necessary to keep the status of the injured workman's condition known. Such reports are to be made to the Board, to the carrier and to the injured workman or his representative. A reasonable charge shall be allowed by the Board for such narrative reports and shall be considered a necessary expense in the reasonable care of the injured workman, to be paid by the carrier.

This new law requires that the treating physician give an initial report as soon as practical identifying the injured workman and stating the nature and extent of his injury. The law does not specify an exact time for such and the time period will depend upon what is reasonable for the doctor consistent with his schedule, patient load, etc. Copies of these reports are to be furnished to the IAB, the injured workman or his representative, and the insurance carrier.

The law requires that subsequent reports reasonably necessary to keep the status of the patient's condition known must be made also. The information included in these reports and the time they are to be submitted should be determined by the physician's best judgment to allow for changes of condition, diagnosis, etc. They will be required only where reasonably necessary. Copies of the subsequent reports on the patient will also be required to be sent to the Board, the injured workman or his representative, and the carrier. If the patient cannot be located, the doctor may discharge his responsibility by forwarding the reports to the last known address of the patient. The IAB has indicated that no additional fee other than the physician's regular fee should be charged for the initial report, however, a reasonable charge may be made on the initial report to cover out-of-pocket cost such as postage, supplies, copying charges, etc., not to exceed $1. On subsequent reports the Board will allow a charge for the physician's professional time, secretarial help, postage, and similar items. These reports are those required by law. Any report which is not required by law but which is merely requested by a party shall not be the responsibility of the carrier for payment unless the carrier is the responsibility of the requesting party.

The IAB has adopted an approved form for the initial report. This form is not a mandatory form however, and any other form such as the AMA approved uniform health insurance service report may be used as long as the form provides the necessary information to the IAB, the insurance carrier, and the injured workman as to the extent of injury, the treatment and diagnosis. In addition to these form reports, narrative reports are always in order. It is anticipated that the approved forms will be furnished by the carrier or may be purchased from a printing company.

The Texas Medical Association's Committee on Workmen's Compensation and Industrial Health has met with the Industrial Accident Board with reference to the new rules and implementation of the new changes. The Committee is in the process of preparing a new *Physician's Workmen's Compensation Guide* in relationship to this subject.

It is also important to note that heretofore the Workmen's Compensation Law applied to employers of three or more employees. The numerical qualification has been removed completely. The law now applies to nearly all employments except for farm, ranch, domestic, and rail workers. Therefore physicians who previously were not required to carry Workmen's Compensation by virtue of not having three or more employees will now be required to purchase Workmen's Compensation insurance in lieu of their previous right to assert common law defenses in actions which may be brought against the physician by injured employees for work related injuries.

The evaluation or rating of disabilities is an important and complex subject. There has always been some confusion about general terms used in compensation laws such as permanent impairment, permanent disability, evaluation of permanent impairment and disability. Generally the evaluation of permanent impairment is purely a medical condition and responsibility. Permanent disability is not purely a medical determination and the evaluation of such is an administrative responsibility and function. The following is recommended: "Guides to the Evaluation of Permanent Impairment," AMA Committee on Rating of Mental and Physical Impairments. Copies may be ordered from AMA, 535 N Dearborn St, Chicago, Ill 60610, Library of Congress Catalogue #74-1516069801; 25M-901G; 671-OP-298.

TMA Office of General Counsel
Ace Pickens

Questions/Answers

Editor's Note: The following is part of a new brochure, "Careers in Dentistry and Medicine—64 questions and answers," compiled by the Media Development Committee of The University of Texas System. Its purpose is to help possible applicants decide whether they want to try to enter one of these fields and if so, to aid them in the process. Copies are available from the UT Medical and Dental Application Center, 800 Brazos, Suite 801, Austin 78701.

Q What is the "Application Center"?
A It is a central office to distribute, receive, and process applications for Dental and Medical Schools of The University of Texas System. It permits the applicant to apply to any or all of the four medical and two dental schools with one set of credentials and guarantees that all schools have the same information. The Center performs most of the routine clerical tasks in preparing materials for admissions committee use. The Center is a source of statistical information used by admissions committees and administration in planning and research.

Q What does the Admissions Committee look for and evaluate as they study an applicant's records and make the decision as to whether he is to be admitted?
A The Admissions Committee looks for evidence that the applicant can benefit from the educational curriculum that lies ahead, survive the rigorous schedule and study demands, and understands the demands placed upon the members of the health professions. This means that they examine the academic records made in college, the kind of courses taken in college, academic honors, extracurricular activities, the letters of appraisal by pre-professional advisors who have known the applicant well, and all information that might give some indication of the person's maturity, motivation, integrity, social awareness and adaptability to professional practice.

Q Approximately how many applications are made each year to either the medical or dental schools?
A The four medical schools receive about 2,500 (1973-74) applications, and the two dental schools receive about 800 (1973-74) applications.

Q In view of the sometimes lengthy interval between application and admission, it would be nice to know the significance of an invitation to interview at a school. That is, if a particular school invites me for a personal interview, does this mean that my chances for acceptance are good or does the school have a policy of interviewing as many applicants as possible regardless of competitive position?
A Medical schools require an interview prior to admission and being invited generally means the applicant has a competitive chance for admission. Interviews are not required of all students entering dental schools.

Q What is the difference between the "Three-Year Curriculum" announced by some schools and the conventional "Four-Year Curriculum" announced by other schools in The University of Texas System?
A Not all three-year curricula are the same, just as the four-year curricula are not all identical. Some three-year curricula are the result of condensing a four-year program into three calendar years by eliminating the summer breaks. Study the catalogues carefully to understand the details of the curriculum in which you are interested.

Q How difficult is it to get a license to practice with a medical degree from a foreign medical school? Does the country studied in make any difference?
A It is difficult. The foreign medical school must be one approved by the World Health Organization. The foreign graduate must pass the examination of the Educational Council for Foreign Medical Graduates. Texas grants licenses to foreign graduates as do most states. Foreign graduates encounter more problems when attempting to obtain licensure by reciprocity from one state to another. The opportunities for top-quality post-graduate training are fewer in number.

The changing face of Texas Medicine

One of the main topics of interest in the February 1924 issue of the *Texas State Journal of Medicine*, now *Texas Medicine*, was the upcoming annual session of the State Medical Association of Texas.

The editor announced that reduced rates of one and one-half fare for the round-trip to San Antonio had already been granted by the railroads.

Another discussion in the issue centered on the possible conflict of dates for the AMA annual meeting in Chicago with the dates for the Republican National Convention in the same city. In view of this, a May date had been tentatively chosen by the AMA Board of Trustees for the meeting only to lead to the discovery that the dates of that particular week had, with few exceptions, been disagreeably cool. This was an item of importance as the meetings were to be held in the unheated buildings of the Municipal Pier. However, all's well that ends well as the Republican National Committee decided to meet elsewhere, leaving Chicago and June open for the AMA.

Remember when $5 would pay a doctor's dues to the Association? In 1924 it would. And by Feb 1, dues had been collected for 368 members. (Today TMA membership has surpassed 12,000; dues are $80 per year for regular members reflecting the increase which went into effect this year.)

Other items receiving considerable discussion at that time concerned the matter of federal tax reduction. Three specific problems affecting doctors were emphasized.

Opposition was expressed over the continuance of taxation under the Harrison Narcotic Act at the $3 a year rate fixed by the Revenue Act of 1918 as a war measure. Opposition was not directed toward the Act itself or such taxation but the fact that a $1 tax was originally deemed sufficient. Physicians felt that the present tax was in excess of the original act and as such represented a discrimination against the medical profession.

Another problem noted was that under the interpretation of the income tax law, physicians were not allowed to deduct expenses incurred in attending meetings of medical societies and in postgraduate study. At that time the Commissioner of Internal Revenue had ruled that a physician away from home in attendance at a meeting of a medical society or while pursuing postgraduate study was not away from home in the pursuit of his profession and that the expenses incident to such travel and study were not ordinary and necessary expenses. Arguments were presented in favor of such a deduction and for the government's encouragement of such meetings in the interest of the public's health rather than discouragement.

Support was expressed regarding a provision of a proposed revenue law that would make the rate of taxation on earned income less than the rate on income from investments, speculation, etc. State and county societies had been urged by the AMA to adopt resolutions concerning this proposal and send them to the House Ways and Means Committee. Individual physicians were encouraged to write their senators and representatives regarding the situation.

On the lighter side, a final note from 50 years ago was the "Naught's a Naught and Figger's a Figger Club" for those physicians who objected to the telephone company's insistence that they say "O" (the letter) instead of naught (the figure).

Medicine in literature

Questions and Answers on Contact Lens Practice, ed 2, Jack Hartstein, MD, St Louis, CV Mosby Co, 1973, $12.75

The second edition of Dr. Hartstein's book will prove, like the first edition, to be valuable for a broad range of disciplines interested in this field. There is a wealth of information to be learned from the author's extensive experience, from ophthalmologists, optometrists, contact lens technicians and manufacturers. The book is thorough in its coverage of fitting, management of problem cases and manufacturing steps, especially conventional hard contact lenses. The section on soft lenses could be longer, since this section occupies only 10 pages.

The "Q & A" format does not lend itself to quickly finding the specific problem one might be interested in, even with the good index. Ideally the reader would first read the entire book rather quickly to familiarize himself with it, so he can more quickly refer back to specific questions as they arise.

A very helpful appendix of tables and standard definitions follows the last chapter. Even after many years of contact lens practice, uniformity of terms still varies somewhat between practitioners, and closer attention and adherence to a standardized vocabulary would be helpful.

This is a useful book that can benefit everyone involved in contact lens work. It is highly recommended.

ROBERT L. ROCK, MD
Austin

IN THE TMA LIBRARY

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DR. CHARLES A. BERRY, NASA's director of life sciences and a flight surgeon associated with medical aspects of the Manned Space Flight Program since its beginning, will become president of The University of Texas Health Science Center at Houston on April 1, 1974. The presidency is a new position created by UT's Board of Regents to bring under the supervision of one administrator the health-oriented schools and services on the Houston campus, including the schools of medicine, dentistry, public health, biomedical sciences and allied health sciences.

Dr. Charles A. Berry

Director of the Emergency Physician's Service for Methodist Hospital in Dallas, DR. BEN E. MOORE has been re-elected secretary-treasurer of the American College of Emergency Physicians. Dr. Moore has been a director of the ACEP since 1970.

DR. DAVID WADE, commissioner of Texas Mental Health and Mental Retardation, will retire the end of August. Dr. Wade commented that poor health and increasing work load necessitate the move. He was appointed commissioner by the state board in 1970.

DR. RONALD C. JONES has been named acting chairman of the Department of Surgery at The University of Texas Southwestern Medical School at Dallas. Dr. Jones has been a member of the faculty since 1964. He succeeds DR. G. TOM SHIRES, who resigned the surgery chairmanship to accept a similar post at the University of Washington in Seattle.

RECENTLY
DECEASED MEMBERS
OF THE
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ASSOCIATION

W. B. Adamson
Abilene, 1904-1973

W. H. Bradford
Dallas, 1901-1973

G. E. Brereton
Dallas, 1887-1973

G. H. Hilliard, Jr.
Canton, 1921-1973

W. M. Irving, Jr.
Irving, 1923-1973

C. F. Skripka
San Antonio, 1915-1973

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Recent deaths

Dr. C. F. Skripka

Dr. Charles Frank Skripka died Sept 13, 1973, at Baptist Memorial Hospital, San Antonio. The 57-year-old physician specialized in pediatrics.

Dr. Skripka earned an MD degree from The University of Texas Medical Branch at Galveston. Following an internship at Presbyterian Medical Center, Denver, he served with the US Navy in Japan. Upon release from the service, Dr. Skripka established his practice in San Antonio where he remained until his death.

Dr. Skripka was a member of Bexar County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Mrs. Augusta Margaret Macek Skripka, San Antonio; two sons, Dr. Charles F. Skripka, Jr, New Orleans, and Donald E. Skripka, Galveston; five sisters; and four brothers.

Dr. W. M. Irving, Jr

Irving family physician since 1948, Dr. Washington Morgan Irving, Jr, died Nov 26, 1973, in Dallas.

Dr. Irving was born in Crowley, La, in 1923. Following receipt of an MD degree from Baylor College of Medicine, Houston, Dr. Irving completed an internship at Methodist Hospital, Dallas. His private practice in Irving was interrupted by service in the US Navy from 1951 to 1953.

Professional memberships included American Academy of Family Physicians, American Society of Abdominal Surgeons, Dallas County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Frances Irving, Irving; son Bruce Wayne Irving, Fort Worth; daughter, Sarah Katherine Irving, Irving; brother, Lynn Irving, Sulphur Springs; and parents, Mr. and Mrs. W. M. Irving, Winnsboro.

Dr. W. B. Adamson

Dr. William Bluford Adamson died Oct 19, 1973, following an acute myocardial infarction. He had been an electrocardiographer at Hendrick Memorial Hospital, Abilene.

Born in Prairie Grove, Tex, in 1904, Dr. Adamson received a BS degree from Trinity University, Waxahachie. His MD degree was earned at Vanderbilt University School of Medicine, Nashville. Following internships at Vanderbilt University Hospital, Nashville, and Barnes Hospital, St Louis, he opened an office in Abilene in 1929. Dr. Adamson served as a lieutenant colonel in the US Air Force during World War II. He returned to Abilene after discharge from the service and continued his private practice until 1968, when he limited his practice to electrocardiography at Hendrick Memorial Hospital, Abilene.

In addition to his membership in Texas Medical Association, Dr. Adamson was past president of Taylor Jones County Medical Society, diplomate of American Board of Internal Medicine, and fellow of both American College of Physicians and American College of Cardiology and a member of American Medical Association. He had received the Gold Headed Cane Award from Taylor Jones County Medical Society in 1963, and the Paul V. Ledbetter Award in June, 1973.

Dr. Adamson is survived by his wife, Sadie Lucile Harris Adamson; one brother, F. L. Adamson; and one sister, Mrs. Mary Catherine Bynum; all of Abilene.

Dr. Adamson

Dr. Brereton

Dr. Hilliard

Dr. G. E. Brereton

Dr. Gilbert E. Brereton, Dallas internist and member of Texas Medical Association for over fifty years, died Nov 3, 1973, following a lengthy illness. He was 86 years old.

A native of Wisconsin, Dr. Brereton received a BS and MS degree from the University of Wisconsin, Madison, and earned an MD degree from Rush Medical College, Chicago. He began private practice in Dallas in 1919, specializing in internal medicine and later limiting his work to gastroenterology.

At the time of his death, Dr. Brereton held the title of emeritus professor of internal medicine at The University of Texas Southwestern Medical School at Dallas. He was an honorary member of Dallas County Medical Society and Texas Medical Association; life member of Dallas Southern Clinical Society; fellow of American College of Physicians; diplomate of American Board of Internal Medicine; and member of American Medical Association.

Survivors include his wife, Jessie Mae Redman Brereton, Dallas; sister, Mrs. Ruth Bayles, Lodi, Wisc; and two brothers, Hugh Brereton, Wayland, Mo, and Dow Brereton, Oregon, Wisc.

Dr. G. H. Hilliard, Jr

Family physician, Dr. George Homer Hilliard, Jr, died Nov 17, 1973, at the age of 52. He had practiced medicine in Canton since 1947.

A native of Canton, he earned a BS degree from Baylor University, Waco, and an MD degree from Baylor College of Medicine, Houston. While serving in the US Navy, Dr. Hilliard completed an internship at the US Naval Hospital, San Diego, Calif. When released from active duty, he returned to Canton where he conducted a family medical practice with his brother.

Dr. Hilliard held memberships in Van Zandt County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his mother, Mrs. Gladys Hilliard; two sons, Capt. Carey Hilliard and George Homer Hilliard, III; daughter, Mrs. Andrea Cannaday; brother, Dr. Dan R. Hilliard; all of Canton; and sister, Mrs. Herb Hartley, Austin.

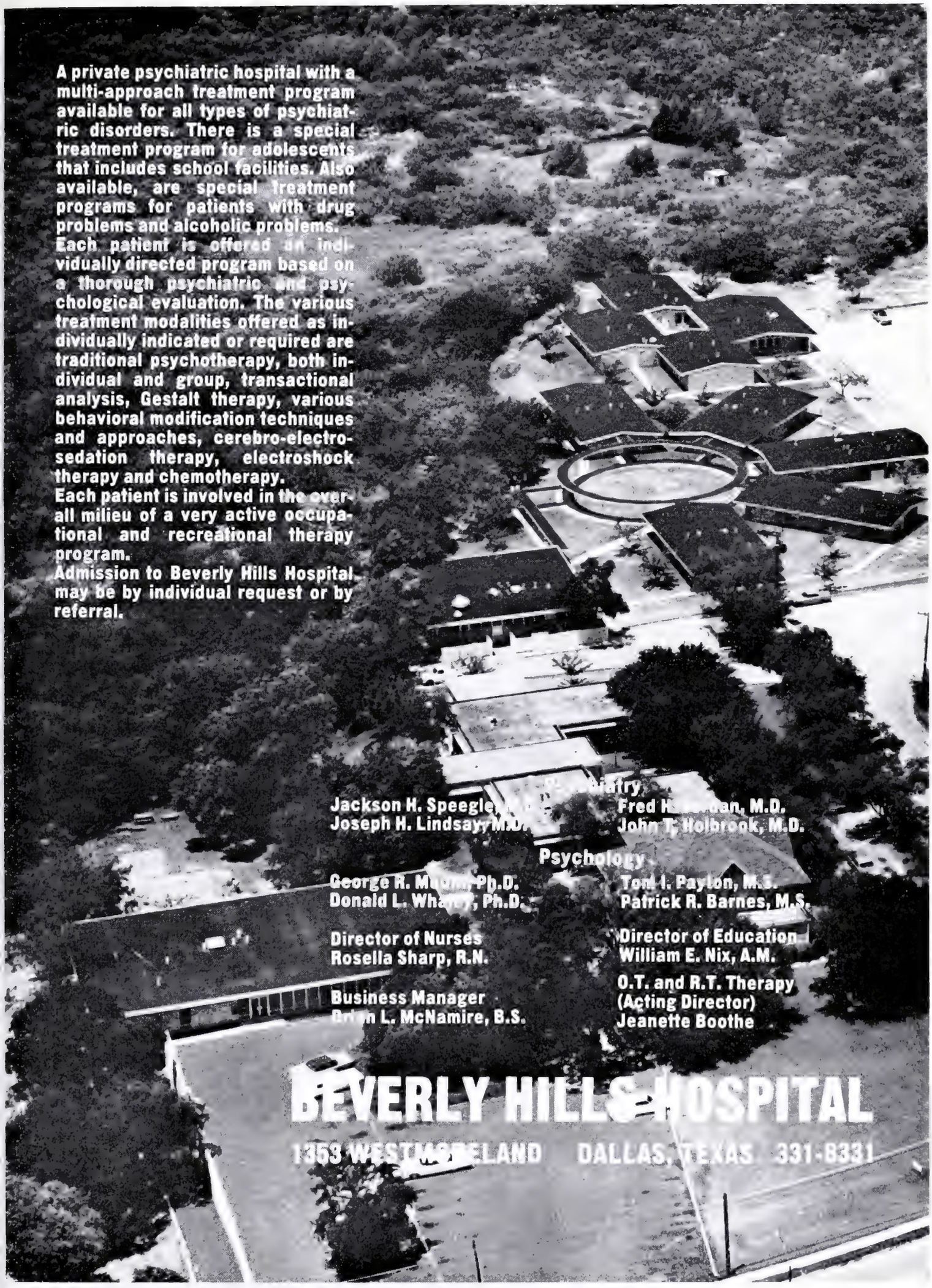
Dr. W. H. Bradford

Dr. William H. Bradford, retired Dallas pediatrician and honorary member of Texas Medical Association, died Nov 16, 1973. He was 72 years old.

Dr. Bradford received an MD degree from Baylor College of Medicine and completed an internship at Long Island College Hospital, Brooklyn, NY. Following internal medicine and pediatric residencies at Long Island College Hospital, he moved to Dallas to establish a private practice. He retired from practice in 1971.

In addition to membership in Texas Medical Association, Dr. Bradford was a member of Dallas County Medical Society, American Medical Association, Dallas Pediatric Society, and Texas Pediatric Society. He was a fellow of American Academy of Pediatrics and American College of Physicians, and a diplomate of American Board of Pediatrics.

Survivors include his wife, Marjorie Barker Bradford; three sons, William H. Bradford, James A. Bradford, and Joseph Bradford; and a daughter, Marjorie Ann Bradford; all of Dallas.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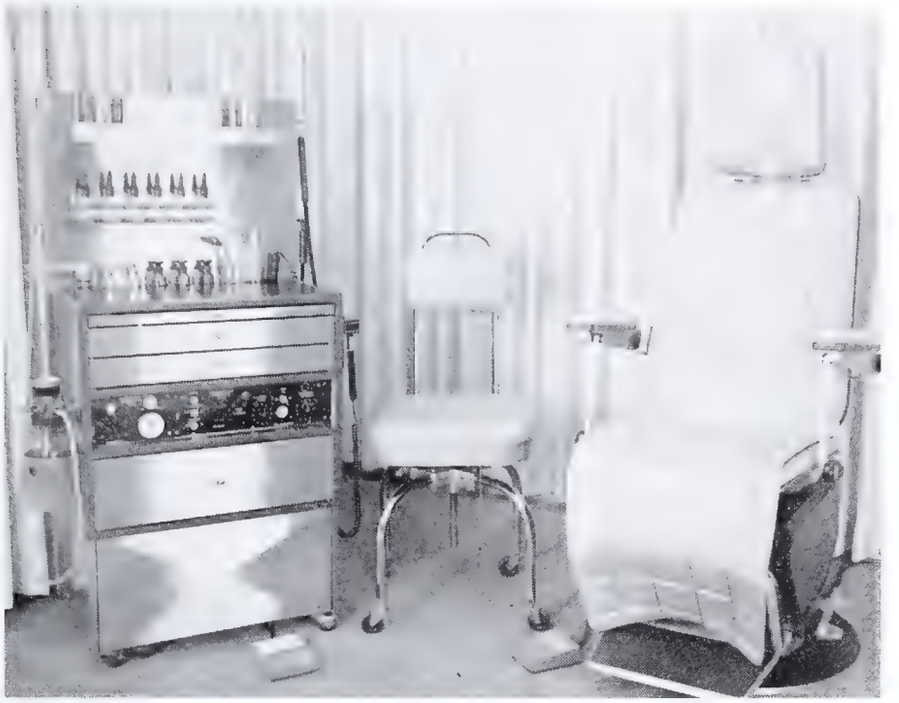

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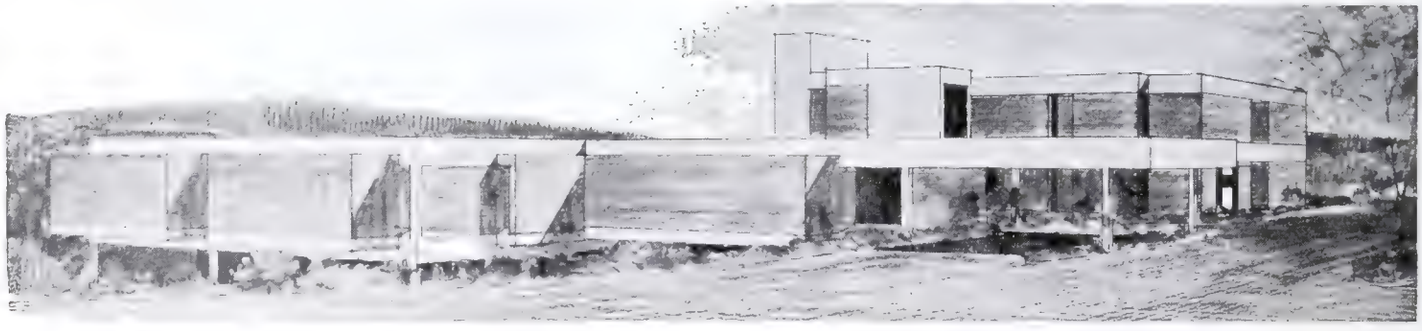

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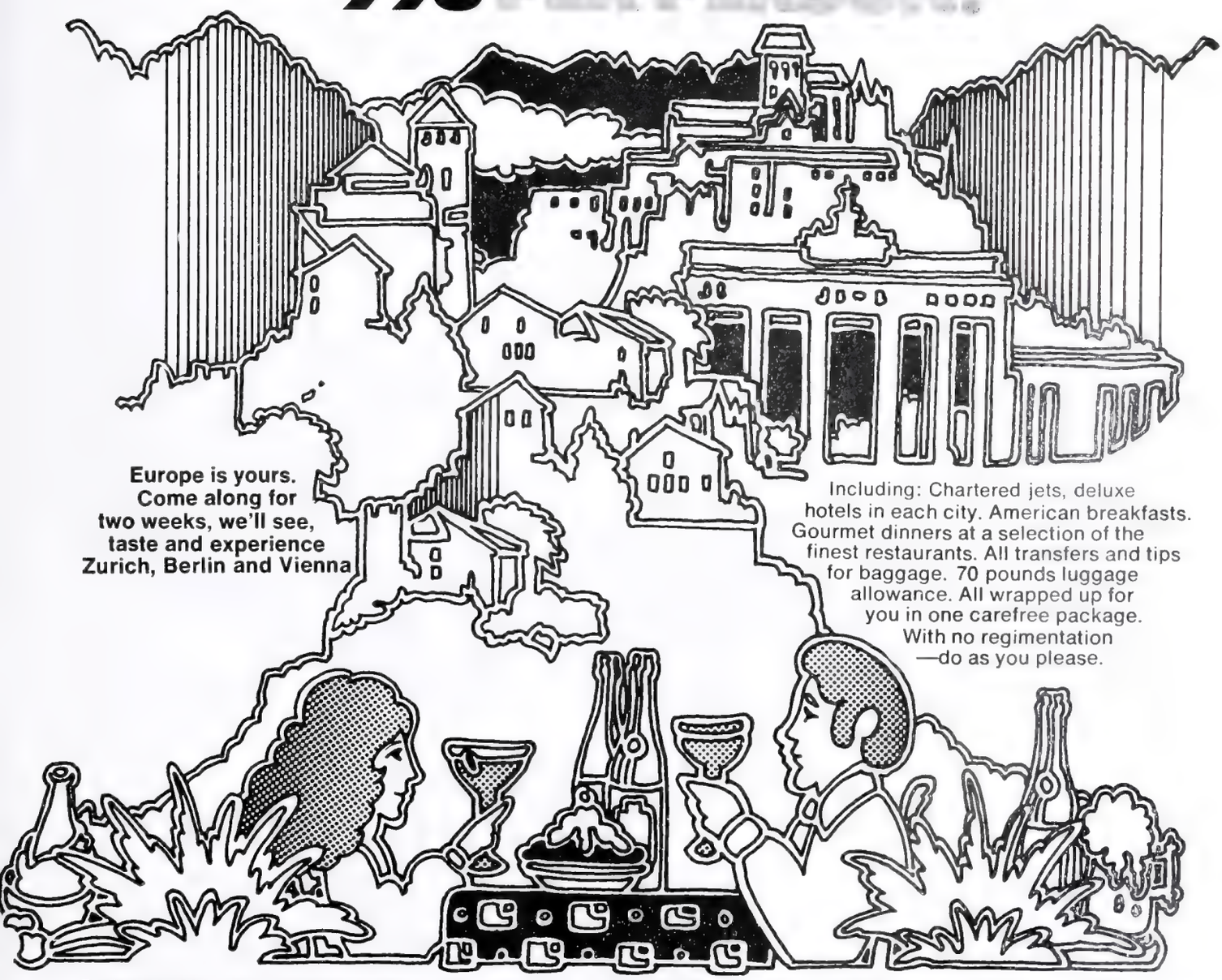

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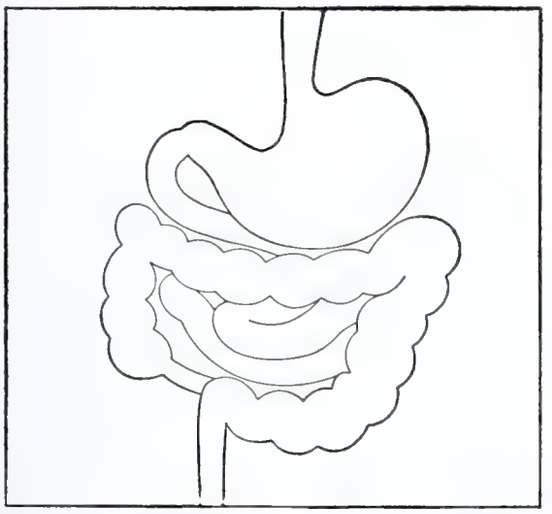

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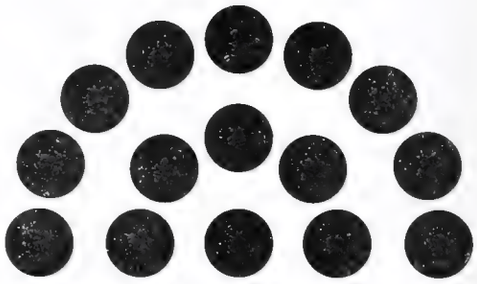
TEXAS MEDICAL ASSOCIATION



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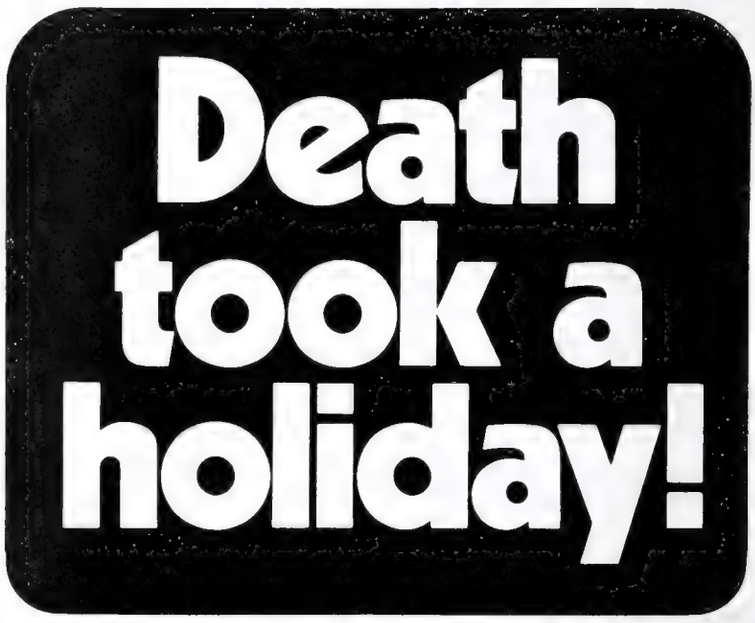

For one day, and one day only, September 20 of last year, no one was killed on Texas highways. One day.

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Physicians Wanted

ORTHOPEDIC SURGEON AND TWO GP's needed by 19 doctor group, 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 3330 South Lancaster Road, Dallas, Texas 75216.

INTERNIST AND GENERAL PRACTITIONER WANTED by a five man group in a 10,000 population county seat town in Central Texas. The location is one hour from Dallas and Fort Worth, 30 minutes from Waco, and 20 minutes from Lake Whitney Dam. The clinic is located in the same building with a 50-bed, fully accredited hospital. The doctors have no hospital financial responsibility. Will start the right man at $30,000 salary for first year and full partnership after one or two years. It will be necessary to do more obstetrics. Please reply to Ad-301, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ATTENTION PILOT PHYSICIANS: Combine emergency room work with flying. Group maintains Bonanza for business and pleasure. Please reply to Ad-365, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER: Excellent location in the Lost Pines of Texas area. Growing community of 3,500 along the beautiful Colorado river has an excellent opportunity for a good family general practitioner. Excellent small hospital (25 beds) and nursing home (62 beds) complex. Guaranteed salary, clinic environment and other fringe benefits will make this difficult to turn down if interested in working in a progressive rural community. Write Ad-386, *Texas Medicine*, 1801 North Lamar Boulevard, Austin, Texas 78701.

FP OR IM TO JOIN THREE MAN GROUP. Investigate facilities, compatability, economics and environment personally with wife and family. Community Health Center, P.O. Box 672, Trinity, Texas. 713-594-3595 for Barnes, Colwell or Cook.

EMERGENCY DEPARTMENT PHYSICIAN IN TEXAS: Average earnings $45,000 with guarantee. Full department status. Maintain free practice of medicine. Work for patient on fee-for-service basis. Call 1-512-653-8221. Apply to Ad-417, *Texas Medicine*, 1801 North Lamar Blvd., Austin, 78701.

WHAT WE NEED, MONEY CAN'T BUY—we need you. GP/S/OB with anesthesiologist thrown in for smalltown practice, solo or duet. Two GPs in town ready to welcome you. Hospital in town, two nursing homes. Friendly life-style, career opportunity galore, work to suit your taste. No moon and stars, but you'll like what we have. Llano, Texas. Contact H. A. Raesener, Jr., AC915/247-5040 for particulars.

FAMILY PRACTICE PHYSICIAN NEEDED to join a three man group doing general practice. New community hospital and new clinic building under construction now, modern golf course, large lake, excellent hunting, excellent schools with no busing and no integration problems. 90 minutes from Dallas-Fort Worth. No investment necessary. Salary first year negotiable, with partnership after one or two years if desired. Contact K. J. Wharram, M. D. or A. D. Major, M.D., Nocona, Texas 76255. AC 817-825-3371.

FAMILY PRACTICE, with two other physicians. 50 bed hospital adjacent to clinic. Two nursing homes located in town. Large patient drawing area, good fishing, hunting, 8 miles to Lake Whitney, excellent schools, churches, and progressive small town. Guaranteed salary until established, partnership available in future. Contact Morris R. Hill, M. D. or James G. Barton, M. D. at Barton & Hill Medical Association, P. O. Box 546, Whitney, Texas 76692; phone AC817-694-2221.

GENERAL PRACTICE—Family practice with two other practitioners. New 43 bed hospital. No investments, other benefits negotiable to your desires, equal privileges, excellent income assured. Contact M. H. Shankles, Administrator, Shamrock General Hospital, 1000 South Main, Shamrock, Texas 79079. Telephone AC806-256-2114.

WANTED: GENERAL PRACTITIONER OR INTERNIST on staff of San Angelo Center. This is an institution for the moderately mentally retarded of the state. Salaries are quite competitive with other state and federal institutions. 40 hour work week, ample vacation time, and other fringe benefits. Excellent community to live, near San Angelo, Texas. Contact Medical Director, San Angelo Center, Carlsbad, Texas 76934.

FAMILY PHYSICIAN: This is an opportunity you should look into. Three family practice physicians need fourth man. No capital outlay, equal privileges, no buy-in, guarantee until established, set your own pace. Clinic, 40-bed hospital, 44-bed extended care, accredited by JCAH. Contact Ray W. Freeman, M.D., Chief of Staff, or Gordon Russell, Administrator, Hi-Plains Hospital-Clinic, 203 West 4th, Hale Center, Texas 79041. Call 806, 839-2471.

NEEDED—INTERNIST TO ASSOCIATE with three busy GP's in Central Texas university town. No internist in area. Should be nice place to live and work. Please reply to Ad-457, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

THREE PHYSICIANS NEEDED. FAMILY PRACTICE PHYSICIAN, INTERNIST AND SURGEON needed to join a full time, five man clinic association group with part time radiologist and clinical pathologist in Clifton, Texas. Located in the heart of Texas, 35 miles NW of Waco, 15 miles from Lake Whitney. Good fishing, excellent hunting, new, recently completed, modern golf course. Excellent schools, churches and growing progressive small town. Closely associated with new 65-bed hospital facility, which is fully accredited by the Joint Commission. Suggest salary at first with partnership in future. Financial terms open. Please contact V. D. Goodall, M.D., Clifton Medical and Surgical Clinic Association, Clifton, Texas 76634. Telephone 675-8621 or 675-3113.

PSYCHIATRIC RESIDENCY IN APPROVED 3-YEAR PROGRAM. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty and programs. Stipends with Texas license are $13,000, $14,000 and $15,000 per year. In addition, now offering residency in child psychiatry. For full information write to: Anthony P. Rousos, M.D., Director of Training and Research, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

GP WANTED TO ASSOCIATE with well established GP in town of 25,000; 75 miles north of Dallas. Good schools and churches, close to Lake Texoma. Privileges in all three hospitals according to qualifications. Salary open. Write or call W. S. Fry, M.D., 2301 South Austin Avenue, Denison, Texas 75020.

FAMILY PRACTICE, with two other family practitioners. Two hospitals with 550 beds within fifteen minute, 4 lane drive. Progressive Central Texas community of 4,350 population. Community void of problems of large cities. 15 miles to Waco (pop. 102,000); 100 miles to Dallas, Fort Worth, and Austin. Good schools (no bussing), churches, country club with 18 hole golf course, three nearby lakes, recreational facilities. An excellent place to raise a family. New associate would be on salary first year; partnership in association later. Exchange calls and weekends with two other physicians. Contact R. Dean Elliott, Administrator, 414 Johnson Drive, McGregor, Texas 76657. AC817-840-3281.

PHYSICIANS NEEDED—Staff physicians, general practitioners and/or board certified specialists to increase staff of Travis State School. Fringe benefits include 40-hour work week, vacation and sick leave. Present and projected salary increases make positions attractive. Texas license required. Contact Superintendent or Medical Director, Travis State School, P. O. Box 430, Austin, Texas 78767. Phone AC512-926-2410. An equal opportunity employer.

FAMILY PHYSICIAN OR GENERAL INTERNIST for group practice in attractive Central Texas town. Must have boards or be board eligible, under 35. Complete group will consist of 3 older GPs and 4 board certified younger men. Write O. W. Lowrey, M.D., Lowrey Clinic, Gatesville, Texas 76528, or phone collect AC817-865-2266.

INTERNIST TO JOIN BUSY, ESTABLISHED, STILL-GROWING PRIVATE PRACTICE, Texas Medical Center. Associated Baylor and University of Texas Medical Schools. Philosophy of practice—high quality personal care. Superb, full diagnostic equipment and facilities. Outstanding quality personnel. Enjoyable and satisfying environment. Future partnership anticipated; beginning arrangements, mutually acceptable basis, dependent upon personal and professional qualifications. Leonard R. Robbins, M.D., Robbins Clinic, 2600 Southwest Freeway, Houston, Texas 77006. 713-529-7623.

URGENTLY NEEDED, BOARD CERTIFIED OR ELIGIBLE INTERNIST OR GENERAL PRACTITIONER for staff physician on medical service and a rehabilitation medicine physician in a 346-bed GM&S hospital located in the beautiful Texas Hill Country only 65 miles from San Antonio. Starting salary determined by training and experience. Excellent vacation and sick leave benefits, insurance, retirement and other fringe benefits. Please write or call Chief of Staff, VA Hospital, Kerrville, Texas 78028, telephone number 512-896-2020, Ext. 112. An equal opportunity employer.

WANTED: PHYSICIAN TO JOIN GENERAL SURGEON AND GENERAL PRACTITIONER in small town. Privately owned clinic and hospital combination. Guaranteed salary. Prefer family practice specialist. For additional information, please contact M. A. Childress, M.D., P.O. Box 289, Goldthwaite, Texas 76844; Phone 915-648-2212.

PSYCHIATRIST WANTED: Board certified or eligible, bilingual (Spanish & English) psychiatrist interested in day care concept to join the staff of the El Paso Psychiatric Clinic. Apply Director, El Paso Psychiatric Clinic, 2616 North Oregon, El Paso, Texas 79902.

GENERAL PRACTITIONER AND INTERNIST. Newly constructed multi-specialty 6-man clinic in West Texas city of 150,000. New 120 bed accredited hospital adjacent to clinic. Top salary with partnership opportunity in two years. Interested applicants send curriculum vitae to AD-483, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ALLERGIST—Board certified or eligible. Join growing solo practice North Central Texas. Salary, then full partnership association. 120,000 population, 300,000 drawing area. Excellent hospital facilities. Ideal family living. Send curriculum vitae with reply please. Hermann Gregory, M.D., 1310 Ninth Street, Wichita Falls, Texas 76301. 817-322-6926.

STAFF PHYSICIANS WANTED NOW: Prefer pediatricians, internists, neurologists, or family practitioners. Texas license required. Base salary $24,000. Bonus available depending on training, experience, specialty boards. Optional tax-sheltered investment opportunity. Richmond State School is an attractive 5 year old rapidly expanding residential facility for the retarded located in a community of 18,000 only 30 minutes from Houston, Texas. The institution is expanding from 800 to 1250 beds, with a 72-bed hospital on campus for management of acute medical problems. On campus specialty consultation clinics are held regularly by the teaching staff of the three nearby medical schools. Contact: K. R. Lewis, M.D., Medical Director, Richmond State School, 2100 Preston Street, Richmond, Texas 77469. Phone 713-342-4681. Equal opportunity employer.

OCCUPATIONAL MEDICINE—Primary care physicians, board qualified in internal medicine, occupational, preventive or aviation medicine, for primary care practice in large multi-specialty clinic. Texas Gulf Coast area, with numerous company accounts and university affiliation. Branch offices and proposed prepay health program and government contracts (no dual compensation involved for retired). Urgent. Write or call J. A. Bakken, Administrator, Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025. Phone 713-526-2671.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $8.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 20th of the month preceding publication. Send copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: FAMILY PHYSICIAN desiring full range of general practice to associate with three man family practice group. Will guarantee minimum and after established, will offer partnership. For more information, please contact University Park Clinic, Box 4109, Wichita Falls, Texas 76308 or call 817-692-2024 for Drs. Deets, Burross, or Dean.

STAFF PHYSICIAN NEEDED for state hospital. Progressive 1,000 resident state institution. Eligibility for Texas licenses required. 40-hour work week, paid vacation, sick leave, holidays, good retirement plan, free group insurance. Kerrville is known as a retirement center. Prefer mature physician over age 50. Please contact Luther W. Ross, M.D., Superintendent, Kerrville State Hospital, P.O. Box 1468, Kerrville, Texas 78028 or phone 512-896-2211.

INTERNIST with subspecialty in either pulmonary disease or gastroenterology to associate with multi-specialty clinic, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

UROLOGIST to associate with multi-specialty clinic, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

RADIOLOGIST to associate with multi-specialty clinic, soon to be in new hospital with all new equipment; fringe benefits, good climate, good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

FAMILY PRACTITIONER to associate with multi-specialty clinic developing a special section on family practice, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

PATHOLOGIST to associate with multi-specialty clinic soon to be in new hospital with all new equipment; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

PHYSICIANS: 715-bed hospital with active medical, surgical, psychiatric services, is in need of general internist, hematologist-oncologist, urologist, and orthopedist, all preferably with certification. Excellent consultation, library, and continuing medical education. Close affiliation with Scott and White Hospital with sharing of house staff. Possible site for medical school. Salary competitive, ample vacation and sick leave, and fringe benefits. Equal employment opportunity agency. Apply Chief of Staff, VA Center, Temple, Texas 76501.

FAMILY PRACTITIONER ASSOCIATE SOUGHT by three family practitioners in expanding population and recreational area with new 22 bed community hospital 30 miles from Austin. Also near enough to San Antonio and Houston to enjoy cultural and post graduate opportunities. Very good earnings from beginning; no buy-in required. Please reply to Bastrop Clinic, 1109 Church Street, Bastrop, Texas 78602. Phone AC512-321-2541.

WANTED: A PHYSICIAN FOR GENERAL PRACTICE in Poteet, Texas. Area population over 8,000; 20 miles south of San Antonio, Texas. Newly equipped $125,000 medical clinic available at very low rates. Equipped with x-ray; offices for two medical doctors; waiting room equipped. Contact A. Hollub, Poteet, Texas; Phone 626-2861.

UNUSUAL OPPORTUNITIES—INTERNISTS, with or without subspecialty interest. Excellent starting salary; fringe benefits include thirty days vacation, thirty days study time. Fort Worth-Dallas metroplex. Age no factor. Expanding private clinic. Call collect, 817-332-8305 or write Ad-490, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WANTED: South Central Texas area. FP, internist or general surgeon oriented to FP. Two man group; fully-equipped, modern clinic, 36-bed hospital which has recently undergone major additions and renovations. 35,000 drawing area; good schools, all denominations represented. Recreational facilities include hunting and fishing. German-Czech background. Ranching and manufacturing represent major income. Reply to Medical Associates, 511 Summit Street, Schulenburg, Texas 78956. Telephone 713-743-4131.

PHYSICIAN NEEDED in a small Hill Country city in Texas. Existing equipped clinic or new facility available. No physician within a forty mile radius. Excellent opportunity for a energetic physician willing to work in a small community. Call collect: Jack Buchanan 512-232-5224 or P.O. Box 699, Leakey, Texas 78873.

WANTED: PHYSICIANS to join the faculty of the Department of Family Practice, Texas Tech University School of Medicine. Broad-based family practice activities including medical student and resident training programs and teaching clinics. Many advantages and exciting opportunities to those who qualify. Contact: Sydney A. Garrett, M.D., Department of Family Practice, Texas Tech University School of Medicine, Lubbock, Texas 74909 or call 806-742-1361.

NEED PHYSICIANS FOR UNIVERSITY HEALTH SERVICE. Excellent working conditions. Salary: more than competitive with excellent fringe benefits. Need two physicians—one with additional administrative abilities. Contact Sydney A. Garrett, M.D., Department of Family Practice, Texas Tech University School of Medicine, Lubbock, Texas 79409 or call 806-742-1361.

PHYSICIANS WANTED FOR AGGRESSIVE OUTREACH PROGRAM—MEDICAL SCHOOL BASED—TARGET—migrant and indigent patients on community level. PURPOSE—provide medical care to under served area and population; train students and residents in community medicine on site; establish channel for pathology to reach medical school teaching program. Knowledge of Spanish helpful, but not essential. Salary per appointment faculty of Family Practice Department. Contact Sydney A. Garrett, M.D., Department of Family Practice, Texas Tech University School of Medicine, Lubbock, Texas 79409 or call 806-742-1361.

Situations Wanted

OPHTHALMOLOGIST, 33, board eligible, university trained, military completed, married, completing retina fellowship in June 1974. Seeking association, partnership, or group but will consider all opportunities. Please reply to Ad-477, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON—married, 37, board certified, FMG, Spanish speaking with extensive additional experience in large clinic in abdominal surgery seeks solo or associate practice. Any size community. Available January 1974. Please reply to Ad-487, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST, trained in general radiology available July 1974. Completing residency now, passed written board 1973, eligible for oral board 1974; born 1928 in Czechoslovakia, graduated in Prague. Married, having Texas and Maryland license. Contact Marian G. Vlasak, M.D., 3629 Legendary Lane, Dallas, Texas 75224.

BOARD CERTIFIED RADIOLOGIST SEEKING a position for employment or practice in Texas. Has an active Texas medical license, and recently left Air Force after 10 years as a physician. He will send curriculum vitae, photograph and respond to inquiries on request. Please contact at the following address: James F. Wunder, M.D., Box 56, Bison, S. Dakota 57620; Phone 605-244-5684.

TWO BOARD CERTIFIED PEDIATRICIANS, a husband and wife, are looking for positions in Texas. Houston is preferable. One has subspecialty in pediatric infectious disease and the other has subspecialty in pediatric endocrinology. Both have passed FLEX exam and applied for Texas state board by reciprocity. Please contact Jalil Zarrabi, M.D., 18101 Lorain Avenue, Cleveland, Ohio 44111.

PATHOLOGIST: Age 32, university training in anatomical and clinical pathology will be completed in July. Military service completed. Seeks position in medium sized hospital or group. Please reply to Ad-491, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

SOUTHEAST MEDICAL CENTER has customized suites available for immediate occupancy, 100 feet from Southeast Baptist Hospital. Ideal location in established quadrant of San Antonio where no medical specialists are offered. Only 17 minutes by freeway from downtown. Contact Manager, 4242 East Southcross, San Antonio 78222. Phone 222-2103.

FOR SALE—LABORATORY EQUIPMENT practically complete set-up for small lab. List of items available on request. Includes Coleman Jr. Spectophotometer water bath, timers, reagent, glassware, instructions. Able to perform CBC, uniralysis, pro-time, RPR card, VDRL slide, pg and mono tests, etc. — $590.00. Contact Carroll E. Murtha, M.D., 3333 So. 11th, Abilene, Texas 79605. AC915-672-4071.

X-RAY MACHINE FOR SALE—In good condition, Picker R 1 X-ray Generator 100 MA and 90 KVP, radiographic Century motor driven table. PX-3B stationary anode x-ray tube, wall cassette and holder. Miscellaneous cassettes and mobile lead shield. $1,000 or best offer. Contact Joseph S. Neigut, M.D., Suite 618 M&S Tower, San Antonio, Texas 78205. Telephone 512-226-5291.

BROWNSVILLE, TEXAS, fastest growing city in state, second in nation, will have available suite of 970 sq. ft. for rent starting April in Medical Arts Building. Contact owner, Hugh Emerson, D.D.S., 157 E. Levee, Brownsville, Texas 78520. Call 512-542-2537.

FOR SALE: Deceased physician's fully equipped office for general practice in small southeast Texas city, population 9,000, county population 29,000; 20 minutes from Beaumont, Texas; near fishing recreation area; light industry; modern doctors hospital; modern convalescent center. Contact Mrs. W. J. Poshataske, John H. Hartman Road, Silsbee, Texas 77656 (AC713-385-2696).

WELL ESTABLISHED 23 year practice of deceased internist, excellent staff, terms on equipment and furnishings, well planned rented office in professional center. Gulf coast town of 12,000, one hour from Houston. Hunting, fishing, golf, tennis, boating, etc. Rapidly growing area with need for physicians. Contact Mrs. Robert E. Leslie, Box 551, El Campo, Texas 77437, 713-543-2598 home or 713-543-2738 office.

LARGE, BEAUTIFULLY FURNISHED OFFICE of the late A. J. Morris, M.D., now available for lease or sale. Excellent location, across street from well established shopping center with good drug store. Adequate space for two doctors; perfect space for one. Contact Mrs. A. J. Morris, 3661 Monticello Drive, Fort Worth, 817-737-7312.

GENERAL AND PEDIATRIC PRACTICE FOR SALE in southwest San Antonio, Texas. Office furnishings included. Potential gross income $80,000 to $100,000 per year. For additional information, please contact Dr. L. Garza, AC512-924-4835, or write 6315 South Zarzamora, San Antonio, Texas 78211.

OPHTHALMOLOGY OFFICE AVAILABLE: Ophthalmology Center Building, Dallas, just north downtown. Three lanes, plus treatment room and office. Building has contact lab, optician, orthopedist and adjacent hospital. Two year lease. Tenant joining another group. Contact Barry W. Uhr, M.D., 2811 Lemmon Avenue East, Suite 404, Dallas, Texas 75204; Phone 1-214-522-8730.

PRIVATE PRACTICE OPPORTUNITIES

In one of the most desirable areas in the Texas Gulf Coast Area. Memorial City Professional Building, in the Memorial Drive-Spring Branch Area of Houston, Texas, has just completed a fifty-seven suite addition. The Professional Building now consists of one hundred twenty offices and is connected to a new two hundred thirty bed general hospital.

Over two hundred thousand people reside within a six mile radius of the Professional Building. The physician to population ratio is excellent to produce a rewarding private practice in virtually every specialty. Particularly attractive opportunity in cardiology avialable at this time.

Write or call Howard E. Troutt, Executive Director, Memorial City Medical Center, 902 Frostwood Drive, Suite 283, Houston, Texas 77024, (713) 464-2711.

Advertising Directory

Abbott
Placidyl 64

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Blue Cross-Blue Shield of Texas 4-5

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The Diagnostic Clinic of San Antonio, P.A. 130

Dorsey Laboratories
Cama 13

El Paso Psychiatric Clinic 126

Flint Laboratories
Choloxin 11-12
Synthroid 44

Ives Laboratories, Inc.
Isordil 14

Mead Johnson Laboratories
Colace 81
Vasodilan 49

Kelsey-Seybold Clinic 93

Eli Lilly and Company
Keflex 52

Marion Laboratories, Inc.
Nico-400 50-51

The Martin X-Ray and Radium Clinic 88

McNeil Laboratories
Butisol 24

Medical Arts Clinic of Corsicana 132

The Medical Protective Company
Malpractice Insurance 130

Memorial City Medical Center, Houston 144

New Orleans Graduate Medical Assembly
37th Annual Meeting 126

The Pharmaceutical Manufacturers Association 42-43

William P. Poythress & Co., Inc.
URO-Phosphate 29

T. Rowe Price Growth Stock Fund, Inc. 88

The Prudential Insurance Company of America
TMA Group Insurance Plan 9

Radiology Associates of Fort Worth 132

Reed & Carnrick
Sidonna 133

R.G.S., Inc.
Income Producing Properties 40

A. H. Robins Company
Donnagel-PG 31
Robitussin 32-33

Roche Laboratories
Bactrim 1-2
Efudex 104-105
Librax 148-149
Valium 128-129

Roerig
Antiminth 16-17

Scott and White Clinic Back Cover

Searle & Co.
Aldactone 62-63

Seaview Hospital 16

Smith Kline & French Laboratories
Ornade 61

Starlite Village Hospital 40

Surgical Mechanical Research, Inc.
Medical & Dental Equipment 127

Texas Medical Association
Annual Session 99-102, 106
Automobile Leasing Program 45
European Adventure 131
Memorial Library Fund 122
Sunbreak Spain 46

Timberlawn Psychiatric Hospital Back Cover

Torbett, Hutchings, Smith Memorial Hospital 2nd Cover

Travis Clinic Foundation and Travis Clinic Association 132

The Upjohn Company
Trobicin 38-39

Wallace Pharmaceuticals
Rondomycin 40-41

Warner/Chilcott
Proloid 88-89

Wichita Falls Clinic-Hospital 127

Physicians' Directory 134-142

Classified Advertisements 143-144

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Editorials

EMERGENCY MEDICAL SERVICES: A PHYSICIAN RESPONSIBILITY

Emergency medical care is a facet of community living that often becomes front page news: "Three Year Old Boy Drowns in Swimming Pool," "Local Banker Dies with Heart Attack at Board Meeting," "Child Suffocates in Plastic Bag," and on and on. Could improved community emergency medical services reduce the number of these heartbreaking stories? Unless you live in a handful of progressive communities, the answer is an obvious "Yes."

Emergency medical care too often falls into the category of air pollution, garbage disposal, and freeway traffic congestion: Everybody talks about it, but few do anything about it. It always seems to be someone else's responsibility.

One thing is certain: Community emergency medical services are, by their very title, *medical.* Medical problems are best solved by medical people. The physicians in the community are the only citizens with the background and expertise to upgrade the quality and quantity of these vital services. Without strong and aggressive physician leadership, a community's emergency medical services will remain inadequate and incomplete.

Although it is often discussed, few people realize the magnitude of the problem. Consider the following statistics compiled by the National Safety Council* and the Committee on Trauma and Committee on Shock of the National Academy of Sciences-National Research Council†: "Accidental injury is the leading cause of death among all persons age 1 to 38 years. Each year more than 52 million US citizens are injured; of whom, more than 110,000 die, 11 million require bed care for a day or more, and 400,000 suffer lasting disability at a cost of nearly $3 billion in medical fees and hospital expenses and over $7 billion in lost wages. Those requiring hospitalization occupy an average of 65,000 beds for 22 million bed-days under the care of 88,000 hospital personnel. This hospital load is equivalent to 130 five hundred-bed hospitals. Of the more than 700,000 deaths from heart disease each year, the majority are due to acute myocardial infarction and more than half of these deaths occur before the patient reaches a hospital. Approximately 40 million persons seek care each year in hospital emergency departments as a result of accidents, heart disease, stroke, poisoning, diabetic coma, convulsive disorders, and many other illnesses." Even as one reviews these facts, the totals are rising.

"Emergency medical service is one of the weakest links in the delivery of health care in the nation. Thousands of lives are lost through lack of systematic application of established principles of emergency care. Few persons at the site of accidental injury or sudden illness are trained in the fundamentals of restoration of breathing, control of hemorrhage, or splinting of fractures. The majority of ambulances in the United States are of the hearse, limousine, or station wagon type which are inadequate in space and equipment and are manned by individuals with inadequate training to provide essential life support. Many ambulances lack radio communication even with their own dispatchers. Communication rarely exists between ambulances and hospitals, so that most patients arrive at emergency departments without prior notification. Most emergency departments are not only lacking in facilities and personnel, but are overtaxed by millions of nonemergency cases for whom ancillary outpatient facilities should be provided by other means. In comparison with facilities for definitive care of illness, few centers of excellence for the care of the critically ill or injured exist."‡

So much for reviewing prepublished facts and well-documented thoughts. What are we in Texas doing about it? Several urban centers and a few rural communities have gotten busy. We salute the progress of our major cities, many of which are now phasing in telecommunications and physician-ordered, on-the-scene care with in-

*Published in *Accident Facts.*
†Published in *Accidental Death and Disability: The Neglected Disease of Modern Society.*
‡Published in *Roles and Resources of Federal Agencies in Support of Comprehensive Emergency Medical Services.*

travenous fluids, emergency drugs, and cardiac defibrillation. These systems will undoubtedly expand to their surrounding suburban areas and, in time, will be county-wide. This still leaves the bulk of the Texas acreage unattended. It is on these highways and roads that near-fatal accidents are indeed fatal, salvageable heart attack victims are lost, and those with rapidly progressive curable illnesses end in obituaries. These are the areas in which improved equipment, trained attendants, and vital communication links are needed.

The Texas Medical Association realized the need for gathering expertise and extending help to these critical areas. In the fall of 1971 a special committee was appointed to gather information, provide coordination and liaison, and disseminate help in the field of emergency medical services. This committee consists of representatives from all geographic areas of the state. They have indeed been gathering information and have initiated liaison with the State Health Department. During the past few years, the State Health Department has trained hundreds of EMTs (Emergency Medical Technicians) and ECAs (Emergency Care Attendants). They have provided outlying communities with communication information and have helped these areas to establish emergency medical systems. These activities have been somewhat curtailed because of the lack of funds. It is imperative that funds be found in order to continue and expand these much needed activities. The legislature created a Division of Emergency Medical Service in the State Health Department during its last session, but failed to fund it. Further legislative action will be required during the next session to remedy this oversight.

Hospital associations have become aware of the importance of upgrading their members' emergency departments. This is a field where medical help is needed. It is only by cooperative efforts between hospital administrators and medical staffs that upgrading and categorization can be efficiently effected. Categorization will be necessary before a statewide emergency medical services plan can be initiated. Full-time emergency physicians have been instrumental in many areas in improving these emergency facilities. Extensive research has been done by the American College of Emergency Physicians in every aspect of emergency department function, management, and upgrading. This information is readily available on request.§

All forms of ambulance services are in existence. All forms of this service are needed in a total system. Each community and area will dictate what they need in the spectrum of emergency transportation. Well equipped ambulances staffed by well trained EMTs are seen in private, municipal, and volunteer services. The problem is that not all of these services are well equipped nor are all their attendants well trained. These deficiencies do not indicate lack of desire, but rather lack of funds, trainers, and coordinators. These are the areas we must attack to find the solutions we need. Once these areas are upgraded, we can then proceed with the task of coordination into a statewide system. Involved would be a compatible communication network, transportation across municipal and governmental boundaries, availability of specialized medical centers for patients outside their ordinary treatment boundaries, payment agreements for treatment of those unable to pay or whose medical funding is restricted to certain counties or districts, and a host of other approaches to existing problems.

The TMA Special Committee on Emergency Medical Services invites and urges your inquiries, suggestions, and requests for help. We, as physicians, must be responsible for improved medical services. These problems can no longer be left entirely to ambulance companies, fire departments, hospital administrators, city and county governments, and others. Medical research and technology have given us the tools with which to save many lives once lost to trauma and acute medical emergencies. The physician's role in community affairs has never been more clear-cut than in this rapidly advancing field of emergency medical services. The responsibility is ours, and one that we must accept.

Robert L. Donald, MD, Houston, Chairman, Special Committee on Emergency Medical Services.

§For information write Headquarters Staff, American College of Emergency Physicians, 241 East Saginaw Street, East Lansing, Mich 48823.

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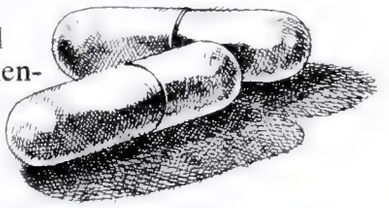

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Proposal Would Socialize US Medicine

The proposed National Health Policy and Health Development Act of 1974, HR 12053, introduced in the House of Representatives, has four principal parts. Part A would establish a national council for health policy. Part B would create a system of health service agencies responsible for areawide health planning and development throughout the country. Part C would assist state governments in the creation of state health commissions responsible for state level health planning and regulatory activities. Part D would create a new federal program of construction assistance for health facilities based on loans, loan guarantees, and interest subsidies. The new programs would commence during the present fiscal year, thus overlapping with the authorities for CHP, RMP, and Hill-Burton. The Secretary of HEW would assist the existing agencies under the latter program in their transition into the new programs, and then at the end of the present fiscal year, the legislative authorities for CHP, RMP, and Hill-Burton would be terminated.

The National Council for Health Policy would be established in the Executive Office of the President. It would be responsible for assessing the nation's health; assessing federal and other health programs; assessing the need for health resources, services, and financing; developing recommendations for a national health policy; issuing guidelines on the appropriate supply, distribution, and organization of health resources and services; and conducting studies and analyses concerning its recommendations for a national health policy.

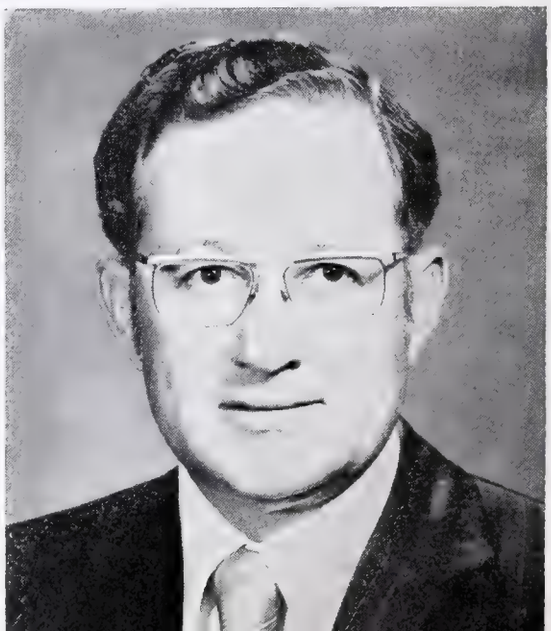
In creating a system of health service agencies (HSA), the HEW Secretary would first divide the nation into health areas for planning and development purposes. He would then designate, in each area, a private nonprofit corporation as the HSA responsible for area planning and development. They would be broadly responsible for preparing and implementing plans designed to improve the health of the residents of their health area; increasing the accessibility, acceptability, continuity, and quality of the health care provided the residents; and restraining costs of such care.

The HEW Secretary would also be required to designate in each state a State Health Commission to be responsible for annual review and approval or disapproval of the plans of the HSAs annual review and comments on the budgets of the HSAs, review of applications submitted by HSAs for assistance from the federal government, commenting on disapproved applications for federal funds, performance of capital expenditure review functions under the Social Security Act, and certification of health services offered within the state. The Commission would also have the power to regulate health care costs within the state, as well as licensure and quality activities.

In my opinion, this is the most vicious proposal to be introduced. This act would totally socialize medicine, and also, would give the federal agency the power to determine who should be licensed to practice medicine in any state, abolish the boards of medical examiners and boards of health, and also utilize arbitrary means for determining what is quality care. I hope that all physicians will communicate with their Senators and Representatives concerning this vicious proposed legislation, and also bring it to the attention of their patients so that many letters of protest can be received prior to any vote on HR 12053.

Charles B. Dryden M.D.

Charles B. Dryden, Jr., MD,
President, Texas Medical Association.



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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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Contents

SCIENTIFIC ARTICLES

55 Pituitary tumors: Recent advances in diagnosis and management
Dr. Naguib A. Samaan; Dr. Milam E. Leavens; Dr. Richard H. Jesse, Jr.

63 Hyperviscosity in IgG myeloma: Detection and treatment in community medical facilities
Dr. Charles W. Seward; Dr. C. Kirk Osterland

66 Case of carcinoma secondary to rectal tuberculosis
Dr. James E. Mathews; Dr. Ransom R. Bucholz

70 Endobronchial occlusive lymphoma
Dr. Giora M. Mavligit

77 Pediatric grand rounds: Current diagnosis and treatment of cardiac arrhythmias
Dr. A. A. Mintz; Dr. Robert L. Williams; Dr. Martin Yudovich

83 Egerton Y. Davis, or: Long live the baby on the track
Dr. Fred C. Rehfeldt

88 Involving physicians in hospital governance
Mr. Morris Maple

EDITORIALS

142 Medical leadership needed in nursing home patient care
Dr. Bernard Rosen

143 Good news: syphilis is down; Bad news: gonorrhea is up
Dr. J. E. Peavy; Dr. Thomas G. Glass, Jr.

146 Medicine: a public utility?
Dr. Charles B. Dryden

FEATURES

101 Oenophiles unite
Dr. Jack L. Eidson

104 Camping fun for the handicapped

106 Free-standing surgical center—a first for Texas

NEWS

6 TMA, AMA stands on current issues

7 Pre-admission certification plan dropped

8 TMA constitutional amendments

8 Bexar County emergency system

8 Scientific exhibits set for Annual Session

10 Medicare premium to increase

10 TMA journalism awards

11 Dr. Ramirez testifies

12 RMPT continues

12 Med school endowment

13 Health dept reassignments

16 Research grants

16 UTMB research program

16 Project Safeguard

17 Dr. Abell awarded grants

17 Insurance Institute report

18 Flu-like illnesses widespread in state

21 Drug reimbursement proposal

21 VD awareness month

22 AMA leadership schools

22 New health bills

23 Manpower report

DEPARTMENTS

28 Capital Comments

33 Continuing Education

44 Coming Meetings

52 Information for Authors

109 Medicine and the Law

111 Medicine in Literature

113 Personals

115 Recent Deaths

ON THE COVER

This month's cover illustrates carcinoma in the style of Victor Vasarely, a world-renowned French painter/printmaker in the idiom of optical art. His visual imagery has been a major influence on many contemporary artists in their search for new modes of visual expression. Several articles on cancer appear in this issue.

NEXT MONTH

Articles scheduled for publication in April include tracheobronchial injuries; rabies prophylaxis after exposure; intraosseous ganglion cyst of the patella; early results of parietal cell vagotomy without drainage in the treatment of duodenal ulcer; chronic subdural hematomas and effusions in infants; and dacryocystorhinostomy in children. Also in April, *Texas Medicine* will bring you the first in a new series of articles on renal disease for the clinician.

For more information on how the Blue Cross and Blue Shield plan can help protect you and your employees, call your local Blue Cross and Blue Shield of Texas representative. He's in the Yellow Pages.

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NEWS

TMA, AMA take active stands on current issues — PSRO, gas rationing, cost controls

The Texas Institute for Medical Assessment (TIMA) steering committee has released the final tally on the PSRO poll taken in January.

Briefly summarized, 11,234 copies of the poll were mailed, and 3,919 (34%) responses were received. Over 90% of the physicians responding, by question, supported 1) the TMA policy for a single, statewide PSRO; 2) the repeal of the PSRO amendment; and opposed 3) the eight regions designated by the Department of Health, Education and Welfare. The eight proposed regions were illustrated in *Texas Medicine*, January, p 7.

On questions number 5 and 6 asking if TMA members supported the TIMA area designations and program or did not support them, Regions 1, 3, 4, and 6 gave better than 90% support to the TIMA proposal; Region 2, 88%; Region 5, 89%; Region 7, 86%; Region 8, 88%.

Questions 9, 10, 11 asked if physicians would participate in PSRO: (a) voluntarily, 23% said yes; (b) "if required," 64% said yes; (c) would not participate under any circumstances, 13% said they would not. Sixty physicians did not answer these questions. Therefore, 87% of the physicians responding to these three questions indicated they would participate in local PSRO either voluntarily, or if required.

Gas rationing contingency plan

TMA president Dr. Charles B. Dryden sent a letter dated Jan 30 to William E. Simon, administrator of the Federal Energy Office expressing concern that the gasoline rationing contingency plan (published Jan 16 in the *Federal Register*) does not provide physicians, health care institutions, and other medical and health personnel with priority allocation of fuels.

In addition, TMA officials have been in touch with Alvin Askew, a legal examiner for the Texas Railroad Commission and head of the designated state fuel allocation office. Mr. Askew indicated to the TMA representatives that he was mindful that physicians need fuel to serve patients. While the role and scope of this office is undetermined at present, TMA will continue to develop liaison with the state allocation office.

AMA files suit

The American Medical Association Board of Trustees directed the AMA Office of General Counsel to initiate legal action against the Cost of Living Council to remove mandatory wage and price controls on physicians. The suit, filed in February, challenges the validity and protests the discriminatory aspects of controls.

The decision was announced by Dr. James H. Sammons of Baytown, chairman of the Board, during testimony last month opposing wage and price controls and the extension of the Economic Stabilization Program before the Senate Subcommittee on Production and Stabilization. Earlier, John T. Dunlop, chairman of the Cost of Living Council, presented an Administration request that control in the health field be extended until the enactment of a national health insurance program including cost controls.

Additional activities related to removal of mandatory controls are being developed by the AMA.

Preadmission certification plan to be dropped by DHEW

The Department of Health, Education and Welfare has indicated that it will drop its proposal to require preadmission certification of Medicare and Medicaid beneficiaries.

The TMA, TIMA, AMA and others had filed comments opposing this part of Regulations 5, Federal Health Insurance for the Aged and Disabled, Conditions of Participation-Hospitals and Skilled Nursing Facilities, and Medical Assistance Programs, Review and Utilization of Care and Services.

HEW Secretary Caspar Weinberger said he had decided that the proposal would "interfere with the physician and his patient." He stated he would seek other ways to hold down Medicare and Medicaid costs.

The period for comment on the regulations was extended to March 11 to permit development of alternatives to preadmission certification that would be acceptable to physicians.

The action followed meetings between AMA officials and President Richard Nixon, Secretary Weinberger and HEW Assistant Secretary for Health Dr. Charles C. Edwards. AMA representatives included Drs. Russell B. Roth, president; Malcolm C. Todd, president-elect; James H. Sammons, Board of Trustees chairman; Ernest B. Howard, executive vice president, and Mr. Joe D. Miller, assistant executive vice president.

NEWS

House to consider constitutional amendments

TMA's Council on Constitution and Bylaws has recommended two changes in the Association's Constitution which were brought before the House of Delegates in 1973 and which may be acted upon at the upcoming Annual Session.

The proposed amendments concern a change in the title of Executive Secretary, and the designation of medical schools (for student membership) as those approved by the Texas State Board of Medical Examiners.

The two proposed amendments which were presented at the previous Annual Session are:

Amend Article II, Section 3, page 5 by adding the words "approved by the Texas State Board of Medical Examiners" between "Texas" and "leading" to read ". . . full time students who are pursuing a course of study in a medical school in Texas approved by the Texas State Board of Medical Examiners leading to a degree of . . ."

Amend Article II, Section 1, lines 7 and 8; Article VII, Section 3, line 5; and Article VIII, Section 1, line 5 by substituting "Executive Director" for "Executive Secretary."

Bexar County launches emergency services plan

The San Antonio/Bexar County Emergency Medical Services Plan became operational March 1 with the implementation of the first stages of an EMS system covering Bexar County.

The first phase of service includes seven core vehicles manned by two Emergency Medical Technicians (EMT), available 24 hours a day to residents of San Antonio and those incorporated cities surrounded by or contiguous to San Antonio. An additional four ambulances, manned by overtime firemen, will be available during peak hours.

All participating hospitals will accept patients brought via ambulance and treat them until stabilized, regardless of financial status. The city will be responsible for collection of the $35 transport fee.

In January, 55 members of the San Antonio Fire Department began a 320 hour EMT training course at the University of Texas Health Science Center. Faculty includes 101 members of the Bexar County Medical Society and allied health personnel.

Beginning June 1 there will be 11 vehicles in full-time operation manned by EMTs. At that time, coverage will be extended to unincorporated Bexar County and other incorporated cities within the county which desire to participate.

Biomedical telemetry will be added in late 1974 to provide additional care in cardiac cases. Planning efforts are also being directed to the development of 24-hour medical supervision of the field EMT via radio communications.

Scientific exhibits set for Annual Session

A multitude of events await physicians at the 1974 TMA Annual Session in Houston, May 9-12 including more than 40 scientific exhibits which have been approved to date.

Exhibits will visually present information on a wide variety of health related subjects such as facial rehabilitation, xeroradiography, geriatrics, services to the blind and visually handicapped, burns, immunization programs, childhood cancer, ultrasonic sonography, and others.

One exhibit will depict the workings of the Astral Program for the Advancement of Continuing Health Education (APACHE), a project for the health education of health professionals via satellite. Approval and some funding have already been obtained

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for televising 300 hours per year of medical, dental, nursing, and allied health programs to begin in 1976.
The Communication Technology Satellite (CTS) will be launched by NASA in mid-1975.
Dangerous plants, snakes, and marine life of the Southwest will be the topic of an audiovisual slide presentation. Another exhibit will demonstrate the use of a home eye test for preschoolers.
For the physician interested in sports medicine there will be a display of protective equipment used in athletics and demonstrations of proper taping techniques for athletic injuries.
History buffs will be interested in the exhibit of the Sunset Hospital of the Southern Pacific Railroad. This exhibit outlines an era of transition in health. The Southern Pacific Sunset Hospital was a model in 1911, outlived its purpose, and became a rehabilitation hospital and annex for The University of Texas M.D. Anderson Hospital and Tumor Institute in 1971. Highlights of its dedication in 1911 from newspapers, drawings from the British Museum in London depicting the railroads, and other transitional events are detailed.

Medicare premium to increase

The Medicare Part B premium will increase 40 cents, to $6.70 a month, starting July 1.
Reasons for the 6.4% increase according to the Social Security Administration are the increased use of physicians' services, rising costs and use of hospital outpatient services, and a trend toward more expensive services.
The government pays 50% of the cost of the Medicare Part B for beneficiaries choosing the optional Medicare program for non-hospital coverage. The new rate would cost the estimated 22.5 million beneficiaries an extra $108 million a year.

TMA announces journalism awards

The 1974 winners of the annual Anson Jones Award competition for outstanding medical journalism have been announced by the Texas Medical Association.
Selected to receive engraved plaques and cash awards for excellence in communicating health information to the public are: Mary Jane Schier, *The Houston Post;* Becky Copeland, *Temple Daily Telegram;* Carlyton Spencer, San Jacinto Publishing Company (*The North Austin Herald, The South Austin Herald, La Fuerza,* and *The Tribune*); Jon McConal, *Fort Worth Star-Telegram;* Mary Midkiff, *Houston Magazine;* Jerome A. Smith, KXYZ, Houston; Yolanda Rios Rangel and Michael Bowie, WOAI-TV, San Antonio; and Bob Johnson and Jim Ryerson, KMID-TV, Midland.
TMA president Dr. Charles B. Dryden will present the plaques and a $100 prize to each winner at a special luncheon ceremony during TMA's Annual Session in Houston, May 9-12.
Entries were evaluated by panels of professional journalists on the basis of accuracy, significance, quality, public interest and impact. Final selection of winners was made by TMA's Council on Public Service and Communication.
Winning entries from the newspapers in Houston, Temple and Austin, and the Houston magazine, consisted of general coverage of medical and health subjects. A feature article, "Researcher Working on Transplants," won the award for McConal.
"Run for Your Life," a documentary on heart disease, was the subject of KXYZ radio's award-winning entry.
WOAI-TV's documentary on child abuse brought them the award, while KMID-TV won the award for their two-part news series on handling emergencies in the Permian Basin.
The award is named in honor of Dr.

Anson Jones, a noted physician, statesman and journalist from early Texas history who was the last president of the Republic of Texas.

Drs. Berry, Levin UT appointees

The Board of Regents of The University of Texas System has ratified the appointment of Dr. Charles A. Berry as president of The University of Texas Health Science Center at Houston and approved the appointment of Dr. William C. Levin as president-designate of The University of Texas Medical Branch at Galveston.

Dr. Berry, NASA director of life sciences and a flight surgeon who has been associated with the medical aspects of manned space flight, will become the first president of UTHSC at Houston on April 1.

Dr. Levin, a UTMB graduate and professor of internal medicine and Warmoth Professor of Hematology at UTMB, will succeed Dr. Truman G. Blocker, Jr., who retires Sept 1.

Poll ranks professions

The medical profession continued to rank high in the public's opinion in recent surveys.

The profession ranked highest in the public's view of various major institutions in a survey conducted by Louis Harris and Associates for the Senate Government Operations Subcommittee. Of those polled, 57% expressed a great deal of confidence in the medical profession. Other results included universities, 44%; TV news, 41%; military, 40%; Senate, 30%; the press, 30%; major companies, 29%; House of Representatives, 29%; labor, 20%; Executive Branch of the federal government, 19%.

The National Science Foundation asked 2,200 adults to list nine professions in order of admiration and esteem. Physicians were first, scientists second, clergymen third.

Dr. Ramirez testifies on migrant health care

Dr. Mario Ramirez of Roma testified before the House Subcommittee on Public Health and Environment in February on the problems of providing health care to migrant farm workers. Dr. Ramirez is vice chairman of the AMA Committee on Health Care of the Poor and chairman of the respective TMA committee.

The Subcommittee was conducting hearings on HR 11511, the Health Revenue Sharing and Health Services Act of 1973. The bill extends and in most cases modifies present authority for block grants to the states for health services, community mental health centers, family planning, developmental disabilities, migrant health, and neighborhood health centers.

In his statement Dr. Ramirez proposed the development of a health insurance program providing coverage for inpatient and outpatient care to the migrant workers. He said this would enable the migrants to have access to medical care in whatever community in which they were located. In its present form the bill does not provide for inpatient services.

Program slated in health administration

The first class in a program in health care administration will enter The University of Texas School of Allied Health Sciences at Dallas in August.

The two-year upper division program will lead to a bachelor of science degree. The degree plan will combine a core of rehabilitation science courses with new offerings in the areas of aging, the handicapped, and rehabilitation facility and nursing home administration. The aim of the program is to prepare graduates for administrative work in long-term care facilities, rehabilitation facilities and in related professional positions, as well

NEWS

as to prepare those who want to do further work in the field for graduate school.
The health care administration degree plan was developed in part under a special improvement grant from HEW.

RMPT continues projects

The Regional Medical Program of Texas (RMPT), currently operating at a level of $865,956 for the fiscal year ending June 30, is funding more than 25 demonstration and testing activities grouped for coordination into seven major projects.
The seven project areas are Regional Health Education, Rural Health, Urban Health Concerns, Health Manpower Development, Upgrading the Quality of Care, Renal Support, and Utilization and Extension.
The Regional Health Education project is concerned with the feasibility of establishing a broad spectrum health education program for the Lower Rio Grande Valley. Through its component activities, coordinated by the Education Service Center (Region I), McAllen, the project strives to identify a method of long term support, develop implementation guidelines, and conduct demonstration projects addressing various phases of health education.
The Rural Health Project will examine the rural health needs in Texas utilizing the Texas A&M University Agricultural Extension Service. The project will identify attempts to address rural health problems and develop guidelines for a statewide rural health program.
The Urban Health Concerns project is designed to demonstrate techniques for determining answers to certain important urban health problems.
The Health Manpower Development Project includes coordination of RMP-initiated manpower studies and occupational analysis in selected health career fields.
The project, Upgrading the Quality of Care, is designed to break the cycle of frustration for professionals who are aware that inadequacies exist in some health care programs and assist them in obtaining new insights, knowledge and skills to help upgrade health care.
The Renal Support program, funded at $48,000, will focus on meeting the needs of kidney patients in Texas. It seeks to increase availability of cadaver organs, establish a common source of antigen, train medical personnel, provide dietary information and support the RMPT renal planning committee.
In the Utilization and Extension project, several conferences and workshops are being sponsored by RMPT. A statewide meeting with regional health planners from the Governor's Office of Comprehensive Health Planning was held in February and plans are underway for a workshop on electrical hazards. The Texas Hospital Association will develop a manual for management use to determine the extent to which health care services can be shared and the mechanisms for sharing.

Medical school receives endowment

The largest single gift to the University of Texas Health Science Center at San Antonio since its establishment was recently announced by Dr. Frank Harrison, president of the Center.
Mrs. Nancy Ullman Karren bequeathed $500,000 to the medical school to endow a chair in the psychiatry department. The Nancy Ullman Karren Chair will be in honor of Henry and Hattie K. Oppenheimer, Mrs. Karren's grandparents.
Mrs. Karren died Nov 18, 1973. According to the terms of her will, the residue of her estate, after the specific bequest to the medical school, will go to the Southwest Foundation for Research and Education.

Malpractice statistics

Despite the publicity resulting from a few large malpractice cases, a medical malpractice incident is a relatively rare event; claims are even rarer and jury trials are rarer still, according to *AMA Update*.

In 1970, a malpractice incident was alleged or reported for one out of every 158,000 patient visits to doctors.

In 1970 a claim was asserted for one out of every 226,000 patient visits to doctors.

Fewer than one court trial was held for every ten claims closed in 1970.

Most doctors have never had a medical malpractice suit filed against them and those who have, have rarely been sued more than once.

In 1970, 6.5 medical malpractice claim files were opened for every 100 active practitioners.

A ten-year survey, from 1960 to 1970 of the claims experience of 2,045 physicians in Maryland indicated that 84% had not been sued, 14% were sued once, and 2% were sued more than once.

Most hospitals, no matter how large, go through an entire year without having a single claim filed against them.

Sixty-nine percent of 4,113 hospitals surveyed from June 1971 to June 1972 had not had a malpractice claim, 10% had one, and 21% had two or more.

If the average person lives 70 years, he will have, based on 1970 data, approximately 400 contacts as a patient with doctors and dentists. The chances that he will assert a medical malpractice claim are one in 39,500.

Health Department announces reassignments

The Texas State Department of Health has announced several personnel changes in the Certification and Consultation Division, Medical Care Administration Services Section.

Effective Feb 1, Eugene L. Bailey, formerly director, Certification and Consultation Division, was reassigned to the Dallas Zone Office of the Division. His new duties and responsibilities will be those of a consultant in hospital administration.

Jess Brown was appointed director of the Certification and Consultation Division. He was the Division's education and training specialist and assistant director prior to assuming the directorship.

Bart Watson has been named the assistant director, administration, of the Certification and Consultation Division. His experience with the Division includes duties as a consultant in hospital administration and supervisor of the Lubbock Zone Office.

TEN LEADING CAUSES OF DEATH

Texas, 1968 & 1972 (Rates per 100,000 population)

CAUSE	1968			1972	
	Deaths	Rate		Deaths	Rate
All Causes	92,098	839.4		99,275	852.2
Heart Disease	31,620	288.2		34,239	293.9
Cancer	15,073	137.4		17,193	147.6
Apoplexy	10,516	95.8		11,076	95.1
Accidents	6,919	63.1		7,243	62.2
Pneumonia	3,283	29.9		3,015	25.9
Diseases of Early Infancy	2,847	25.9		2,423	20.8
Diabetes Mellitus	1,761	16.0		1,910	16.4
Generalized Arteriosclerosis	1,636	14.9		1,734	14.9
Homicide	1,286	11.7		1,577	13.5
Cirrhosis of the Liver	1,175	10.7	Suicide	1,395	12.0

(Source: Texas State Department of Health)

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

When you determine that the depressive symptoms are associated with or secondary to predominant anxiety in the psychoneurotic patient, consider Valium (diazepam) in addition to reassurance and counseling, for the psychotherapeutic support it provides. As anxiety is relieved, the depressive symptoms referable to it are also often relieved or reduced.

The beneficial effect of Valium is usually pronounced and rapid. Improvement generally becomes evident within a few days, although some patients may require a longer period. Moreover, Valium (diazepam) is generally well tolerated. Side effects most commonly reported are drowsiness, ataxia and fatigue. Caution your patients against engaging in hazardous occupations or driving.

Frequently, the patient's symptoms are greatly intensified at bedtime. In such situations, Valium offers an additional advantage: adding an *h.s.* dose to the *b.i.d.* or *t.i.d.* schedule can relieve the anxiety and thus may encourage a more restful night's sleep.

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Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Research grants awarded to Texas MDs

Four Texas physicians have been granted American Cancer Society research grants totaling $176,175, according to a recent announcement by Dr. E. Jackson Giles, president of the Texas Division of the Society.

Effective Jan 1, the new grants were made to Dr. Naguib A. Samaan, M.D. Anderson Hospital, Houston, $27,975; Dr. Russell A. Prough, Southwestern Medical School, Dallas, $40,814; Dr. Anthony R. Means, Baylor College of Medicine, Houston, $50,000; Dr. Karl Folkers, University of Texas, Austin, $57,386.

The new grants are in addition to 63 ongoing American Cancer Society research projects currently in effect in Texas for a total funding in the state of $1,548,473.

Institution grant totals include: Baylor University College of Medicine, Houston, $610,743; Baylor University Medical Center, Dallas, $15,600; University of Texas, Austin, $87,032; University of Texas Medical Branch, Galveston, $24,000; University of Texas M.D. Anderson Hospital and Tumor Institute, Houston, $543,332; University of Texas Medical School, San Antonio, $48,938; University of Texas Southwestern Medical School, Dallas, $214,028; and University of Texas Dental Branch, Houston, $4,800.

UTMB research program to study psychiatric disorders

With a $100,000 grant from the Robert Lanier Foundation of Houston, a multidisciplinary research program in mental health has been created at The University of Texas Medical Branch at Galveston to study new biomedical and biochemical approaches which will lead to more accurate diagnosis and improved therapy of schizophrenia and other psychiatric disorders.

The UTMB research group, officially called the Multidisciplinary Biomedical Research Program in Mental Health, is made up of clinicians and researchers from the Medical Branch.

Dr. Allan L. Goldstein, acting director of the program, said there is a need for more and better research to uncover the underlying biochemical causes of mental disease and to improve diagnostic screening and methods of treatment.

Included in the research programs to be initiated will be a study of the metabolic differences between normal and schizophrenic patients to determine subtle biochemical anomalies.

The group will also attempt to objectively identify the relationship between glucose metabolism and brain function in normal and schizophrenic individuals.

Dr. Goldstein said the group will also be charged with identifying important areas of research and clinical progress in the treatment of schizophrenia and other mental disorders and various other goals to be met over the next two years.

Project Safeguard meets objectives

Texas A&M University and the Agricultural Extension Service have termed Texas' "Project Safeguard" a success in meeting its objectives of helping to protect humans and animals and contributing to a cleaner environment.

Projects were initiated by the Agricultural Extension Services of a number of southern states last year to bring messages on the safe use of pesticides directly to those engaged in supplying and using the materials.

The project was a cooperative venture with the US Environmental Protection Agency.

Information on pesticide safety was delivered on a door-to-door basis to farmers, farm workers, farm wives, chemical companies and dealers, cot-

ton gins, commercial pesticide applicators, and farm associates. Counties in the project were selected on the basis of their high use of ground equipment for applying pesticides.

A limited number of farmers were interviewed following the visits. More than 96% of those interviewed demonstrated an understanding of safe pesticide use, and over half made changes after receiving safety information from the program aides.

In conjunction with Project Safeguard, county extension agents also contacted 9,000 medical doctors throughout the country to provide them with information on pesticide safety.

NARMP wins suit

The National Association of Regional Medical Programs has won a suit in US District Court in Washington, D.C., which called for the removal of the five priority areas to which RMP funding was limited.

NARMP, which receives no program funds but is supported by private individual contributions, brought the suit on behalf of the 53 federally funded Regional Medical Programs in the United States.

"Of course you have never heard that diagnosis before. I have it copyrighted."

Dr. Abell awarded grants

Two grants totaling slightly more than a quarter million dollars have been awarded by the National Cancer Institute to Dr. Creed Abell, head of a cancer research team at The University of Texas Medical Branch.

The larger grant is for four years at a total amount of $184,629 to be used for the study of the biochemistry of human lymphocytes that are isolated from healthy donors and from patients with chronic lymphocytic leukemia.

Dr. Abell said the objective of this research proposal is to determine differences in the regulation of cell division between human normal and leukemic lymphocytes.

The other is a three-year grant amounting to $67,855 and will be used to develop a new agent, phenylalanine ammonia-lyase (PAL), for the treatment of cancer.

Previous studies by Dr. Abell and his colleagues have shown that PAL inhibits tumor growth in animals.

Health Insurance Institute releases opinion report

The Health Insurance Institute has prepared a report on "important" recent studies concerning the attitudes of the general public, of physicians, and of health care leaders.

The studies reviewed by the Institute include the Harris Poll, 1967, 1971; Health Insurance Institute, 1971; Health Institute Health Leadership Study, 1970; National Opinion Research Center, 1971; Opinion Research Corporation, 1953, 1955, 1971, 1972; Potomac Associates, 1971, 1972.

The Health Insurance Institute analysis identified trends and similar findings presented in the studies. The major findings are: the American public is extremely concerned about its level of health; there is much concern about the perceived shortcomings

NEWS

and problems in the health care system; there is concern that health coverage is inadequate for most individuals in the country; there appears to be much acceptance and support for national health insurance.
The form of the health insurance which has enlisted significant support includes the provisions that it should be federally administered; it should provide for comprehensive coverage; and coverage should include the entire population, regardless of income.
There was found to be a slight distrust of private health insurers taking a role in national health insurance.

Flu-like illnesses widespread in state

Influenza-like illnesses have been rather widespread throughout Texas this season according to a report by Dr. M. S. Dickerson, chief, Communicable Disease Services of the State Department of Health.
The first notification of an impending outbreak came from several small communities during the last week of January. The increased morbidity was noticed to be affecting primarily students in elementary and high schools. The communities first involved were Brady, Plainview, Mineral Wells, Conroe, and San Marcos. School absenteeism was running on the average of 30%.
By Feb 15 reports were received by the Department that the influenza-like illness had affected virtually every small community in the state. The prevailing symptoms were fever, cough, sore throat, running eyes and nose, headaches, and some reports of nausea, vomiting, and diarrhea.
At the end of February the State Laboratory had isolated the Influenza B virus from specimens received from San Marcos, Plainview, Mineral Wells, Tyler, and Austin. Influenza B virus has also been isolated in Dallas by the University of Texas Southwestern Medical School laboratories.
Statewide morbidity is presently at influenza epidemic levels as compared to previous years when influenza was in epidemic proportions. A mortality increase has not yet been noted in the current influenza outbreak.

Kelsey-Seybold/Baylor Med form affiliation

Officials of the Kelsey-Seybold Clinic and Baylor College of Medicine have announced a formal affiliation agreement to provide for the college's expanding educational responsibilities, while strengthening medical investigation and enhancing the role of health sciences management in health care delivery.
A Policy and Planning Committee with equal representation from both organizations has been appointed to coordinate and develop joint programs.

Vaccination requirement changes for travelers

The Texas State Department of Health reports that effective Jan 1, 1974, the International Health Regulations were modified by the 26th World Health Assembly of the World Health Organization to eliminate the requirement for cholera vaccination for international travelers.
Last year, 170 countries had some type of cholera vaccination requirement for travelers. All countries except 20 have indicated compliance with the new regulations.
Countries that continue to require evidence of cholera vaccination from travelers arriving from cholera-infected areas or from all countries any parts of which are infected include Australia, Iraq, Nauru, Christmas Island, Yugoslavia, Saudi Arabia, Egypt, Madagascar, Swaziland,

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Medicine's men on the Hill.

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In the 92nd Congress, about 10% of all legislation introduced was health related—more than 2,500 bills. The AMA's representatives serve as the eyes, ears and voice for our profession on such legislation. Keeping in close contact with members of Congress and their staffs. Explaining and promoting our profession's views. Reporting on legislation. And providing legislators with resource material and information on medical and health subjects.

They're on the Hill to protect your interests, lobbying to retain the basic principles of private practice in any government health program that might be enacted. Equally important, they lobby to insure the passage of constructive and workable health legislation for the public.

Sure, the AMA lobbies. We lobby for the rights and interests of our profession and for quality medical care for every American. By adding your voice, your support, we can be even more effective.

Join us.
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Greece, Malta, Thailand, Guinea, Namibia, and Libyan Arab Republic.
Iran requires evidence of cholera vaccination from travelers from cholera-infected areas and from Afghanistan, Bahrain, Bulgaria, Burma, India, Iraq, Malawi, Malaysia, Pakistan, Philippines, Singapore, Thailand, Tunisia, Vietnam. Italy requires evidence of cholera vaccination from travelers arriving from all countries any parts of which are infected and from Guinea.
Papua-New Guinea requires evidence of cholera vaccination from all travelers except those coming from Oceania.
Burma and India require evidence of cholera vaccination from all travelers departing for any country which requires cholera vaccination certification.

MDs urged to oppose drug reimbursement proposal

In a letter to C. Lincoln Williston, TMA executive secretary, C. Joseph Stetler, president of the Pharmaceutical Manufacturers Association, commented on the Department of Health, Education and Welfare's proposal to limit drug reimbursements under Medicare and Medicaid "to the lowest cost at which the drug is generally available unless there is a demonstrated difference in therapeutic effect." He also called upon the medical profession to express its views and to resist this proposal.
Mr. Stetler disputed the proposal's premise that the Food and Drug Administration can assure the uniform quality, efficacy and equivalency of all marketed drugs. He said that all drug products are not of equal quality and the FDA is in no position now, or in the foreseeable future, to assure their effectiveness or equivalency.
He cited as evidence records of the Department of Defense which showed for the period 1962 through 1971 that the Military Defense Supply Agency, the world's largest single purchaser of pharmaceuticals, rejected 42% of drug product samples and gave failing marks to 45% of the production facilities inspected.
Mr. Stetler pointed out that this matter is being considered by the Subcommittee on Health in the Senate. (For further comments, see editorial by Dr. James Sammons, *Texas Medicine*, January, 1974, p. 130.)

NEWS

April declared VD awareness month

In view of the growing venereal disease epidemic in Texas and the nation, Gov Dolph Briscoe, upon suggestion of the Texas Medical Association's Committee on Public Health, has declared April as "VD Awareness Month" in Texas.
Texas State Department of Health figures show 64,210 cases of gonorrhea and 5,354 cases of syphilis reported in 1973. This represents an approximate 12-15% annual increase in gonorrhea over 1972, with 87% of the reported cases in the age group 15-29. There was a 26% increase for the 10-14 age group in reported gonococcal infections.
According to the health department, the "uninformed" teenager is the prime target of VD. Various organizations such as the Optimists, Jaycees, Texas Pharmaceutical Association, and the Texas Federation of Women's Junior Clubs will be sponsoring public information and education activities throughout the state during April.
These activities are endorsed by the state and local health departments as well as TMA and county medical societies.
Information is being distributed to the news media across the state. Included in these materials are radio and television spots on VD developed jointly

NEWS

by TMA and the Texas Association of Broadcasters.

Additionally, school superintendents are being asked to consider instituting VD education as part of health curricula. Principals are being urged to make posters and pamphlets available to junior and senior high school students. Parent-teacher groups are being contacted for their cooperation. College newspapers are being asked to carry aticles on VD.

The Committee on Public Health recommends that physicians increase their index of suspicion and broaden their diagnostic horizon concerning venereal diseases. In view of recent health department information, indicating that a high percentage of infected GC males are asymptomatic, culture methods and prophylactic treatment should be considered. Awareness of the asymptomatic GC female and the high VD incidence in the younger age groups should be continued.

AMA schedules leadership schools

The American Medical Association has scheduled Speakers and Leadership Schools for August and November at the Chicago Marriott.

The sessions, Aug 30-Sept 1 and Nov 15-17, are open to physicians, medical executives or auxiliary members who are interested in improving their communications skills for leadership roles within the profession or outside organizations. Skills covered include speaking to inform and persuade audiences of physicians and laymen; and techniques for spokesmen during news interviews, or while guests on radio or television.

Registration fee is $75 and each session is designed for a maximum of 30 participants. Registration is being handled by Mortimer T. Enright, director, AMA Speakers and Leadership Programs, 535 North Dearborn St, Chicago, Ill 60610.

Congress to consider new health bills

A new health bill which will come before the Second Session of the 93rd Congress has been introduced by Chairman Paul Rogers (D-Fla) of the House Subcommittee on Public Health and Environment and Rep William Roy (D-Kan) and Rep James F. Hastings (R-NY).

This bill, the National Health Policy and Development Act of 1974 (HR 12053), would, among other features, replace existing health planning and development programs including comprehensive health planning, Hill-Burton and Regional Medical Programs.

The proposed Act has four principal parts. Under Part A, there would be established in the Office of the President a National Council for Health Policy made up of five members appointed by the President to oversee the development of a national health policy and review all federal health programs. This Council would "Be responsible for assessment of the nation's health; assessment of federal and other health programs; assessment of the need for health resources, services, and financing; developing recommendations for a National Health Policy; issuing guidelines on the appropriate supply, distribution, and organization health resources and services; and conducting studies and analyses concerning its recommendations for a National Health Policy."

Consequently, from the Executive Branch of the government, orders covering every aspect of health care would be issued for implementation throughout the country.

Under Part B of the Act, a system of Health Service Agencies would be created whereby the Secretary of the Department of Health, Education and Welfare (HEW) would be responsible for dividing the nation into health areas for planning and development purposes.

These organizations would be broadly responsible for "preparing and implementing plans designed to improve the health of the residents of their health areas; increasing the accessibility, accountability, continuity, and quality of the health care provided the residents; and restraining increases in costs of such care." The Health Service Agencies would also have review and veto power over proposed uses of federal funds within an area and provide assistance to the newly created State Health Commissions in "certifying" the needed health services in the area.

Part C of the bill would "assist state governments" in the creation of State Health Commissions designated by HEW and responsible for state level health planning and regulation. These State Health Commissions would have broad and sweeping authority as to implement rate regulation of charges made by health care facilities on a regulated utility concept. In addition, the State Health Commissions would be responsible for annual review and approval or disapproval of the plans of the Health Service Agencies, the annual review and comment on the budgets of Health Service Agencies, review of applications submitted by the agencies for assistance from the federal government, performance of capital expenditure review functions under PL 92-603, certification as needed of health services offered within the state and even licensure and quality assurance functions. If a state did not designate a State Health Commission within four years of enactment of the legislation, the Secretary of HEW would take over these functions himself.

Part D of the bill would create a new federal program of Construction Assistance for Health Care Facilities. The bill leaves open the transition from Hill-Burton, Comprehensive Health Planning and Regional Medical Programs to the proposed new law.

A similar bill (S 2994) encompassing the proposals of Parts B and C of HR 12053 has been introduced in the Senate by Sen Edward M. Kennedy. The Senate Subcommittee on Health had scheduled hearings for March 11 and 19. The AMA was expected to testify before the subcommittee chaired by Sen Kennedy on the 19th.

Hearings on HR 12053 by the House Subcommittee on Health and Environment will be conducted in late March. The AMA has expressed its opposition to Parts A, B and C of this bill.

The Texas Medical Association has also expressed its official disapproval of HR 12053 and urges the members of the TMA to likewise express their individual views to their congressmen on this legislation.

Manpower report published

A report on manpower requirements, resources and education, entitled *Allied Health Manpower in Texas, 1973,* has been published by the Texas Medical Foundation and the Texas Hospital Association operating under a grant from the Regional Medical Program of Texas.

The report was prepared from surveys conducted last year by THA and the TMF office of medical and health manpower. The objectives of the study were to identify the numbers, locations and categories of allied health personnel in Texas, and to assess the present and future need for these personnel.

The section on "Doctors of Medicine" reports that there were 15,450 licensed medical physicians in Texas in 1972. Active physicians (MDs) numbered 14,756, of whom 1,807 were federal physicians and 12,765 were non-federal. Of the active, non-federal MDs, some 9,389 or 74% were providing patient care in an office-based practice.

Some 12,349 physicians were selected in order to include, in the survey of physician manpower, each active, non-federal MD who provides patient

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Indications. Proloid (thyroglobulin) is thyroid replacement therapy for conditions of inadequate endogenous thyroid production: e.g., cretinism and myxedema. Replacement therapy will be effective only in manifestations of hypothyroidism.

In simple (nontoxic) goiter, Proloid (thyroglobulin) may be tried therapeutically, in nonemergency situations, in an attempt to reduce the size of such goiters.

Contraindication. Thyroid preparations are contraindicated in the presence of uncorrected adrenal insufficiency.

Warnings. Thyroglobulin should not be used in the presence of cardiovascular disease unless thyroid-replacement therapy is clearly indicated. If the latter exists, low doses should be instituted beginning at 0.5 to 1.0 grain (32 to 64 mg) and increased by the same amount in increments at two-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out before the drug is administered. If hypopituitarism is present, the adrenal deficiency must be corrected prior to starting the drug.

Myxedematous patients are very sensitive to thyroid and dosage should be started at a very low level and increased gradually.

Precaution. As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions. Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration. Optimal dosage is usually determined by the patient's clinical response. Confirmatory tests include BMR, T_3 ^{131}I resin sponge uptake, T_3 ^{131}I red cell uptake, Thyro Binding Index (TBI), and Achilles Tendon Reflex Test. Clinical experience has shown that a normal PBI (3.5-8 mcg/100 ml) will be obtained in patients made clinically euthyroid when the content of T_4 and T_3 is adequate. Dosage should be started in small amounts and increased gradually with increments at intervals of one to two weeks. Usual maintenance dose is 0.5 to 3.0 grains (32 to 190 mg) daily.

Overdosage Symptoms. Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

(Treatment: In shock, supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.)

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PR-GP-31-B/W

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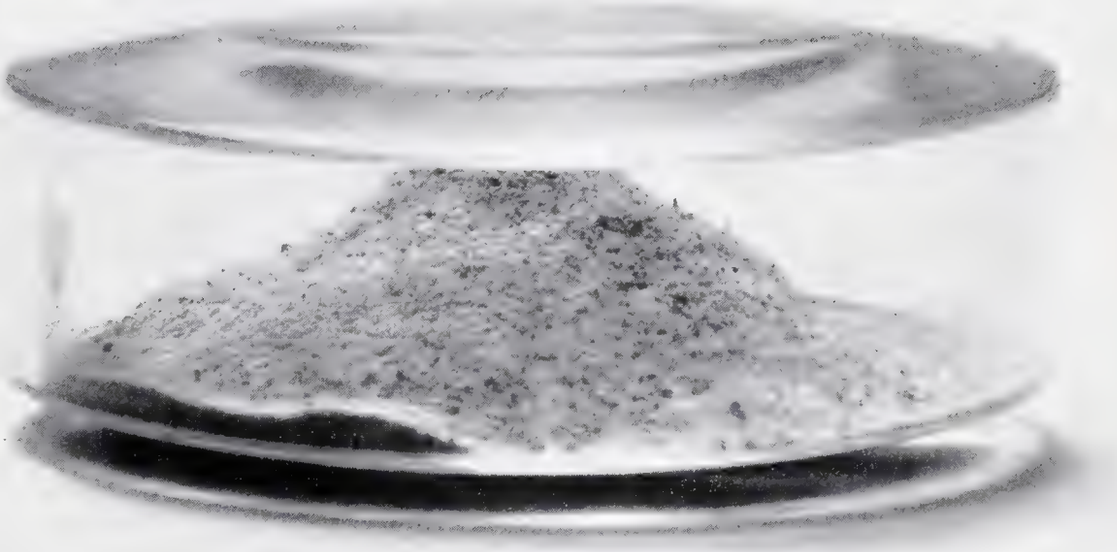

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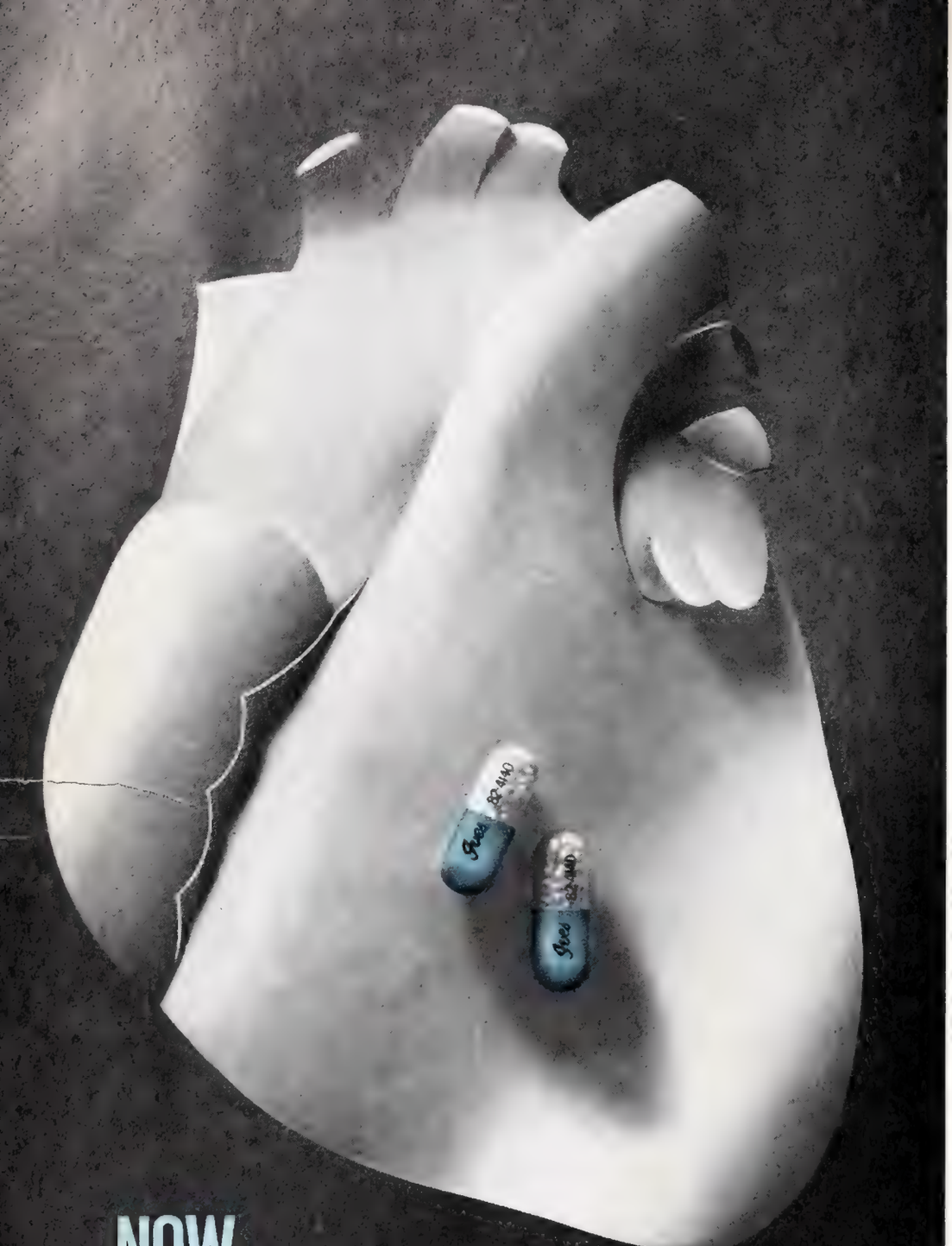

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"Possibly" effective: When taken by the oral route, Isordil (isosorbide dinitrate) is indicated for the relief of angina pectoris (pain of coronary artery disease). It is not intended to abort the acute anginal episode, but is widely regarded as useful in the prophylactic treatment of angina pectoris.

Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.

Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur. In patients with functional or organic gastrointestinal hypermotility or malabsorption syndrome, it is suggested that either the ISORDIL 5 mg. or 10 mg. Oral tablets or sublingual tablets be the preferred therapy. The reason for this is that a few patients have reported passing partially dissolved ISORDIL TEMBIDS tablets in their stools. This phenomenon is believed to be on the basis of physiological variability and to reflect rapid gastrointestinal transit of the sustained action tablet. TEMBIDS SHOULD NOT BE CHEWED.

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

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care in an office-based practice. Completed questionnaires were obtained from 8,192 or 66% of the selected physicians.

According to the report the total number of non-federal physicians increased from 11,760 in 1968 to 13,423 in 1972 and the ratio to population rose from 108 to 117 non-federal physicians per 100,000 persons in that period. The number of physicians providing direct patient care in office-based practices increased from 8,860 in 1968 to 9,389 in 1972. In relation to the population the ratio of physicians in office-based practices remained the same at 82 per 100,000.

Of those Texas physicians licensed in January 1972, survey responses indicate that in March 1973 there were an estimated 12,934 active, non-federal physicians. Some 11,866 MDs were employed in direct patient care activities of which approximately 9,058 or 76% were providing direct patient care in 6,356 office-based practices.

Of the 11,866 active non-federal physicians providing patient care in March 1973, North Central Texas had the greatest number (2,894) among Planning Regions and Brazos Valley had the smallest number (83). Three planning regions, in 1973, accounted for more than 60% of the 11,866 active non-federal physicians providing patient care: North Central Texas, including the Dallas-Fort Worth metropolitan area; Gulf Coast, including the Houston-Galveston metropolitan area; and Alamo, including the San Antonio metropolitan area. Population ratios for active non-federal physicians providing patient care ranged from 55 per 100,000 in Deep East Texas to 135 per 100,000 in Alamo State Planning Region.

The report studied the number of full-time equivalent (FTE) persons employed by non-federal office-based physicians in Texas, the comparison of the number of employees for 1970 and 1973, and the number of budgeted positions vacant. From this information the following conclusions were drawn.

By 1980, medical physicians will need the services of 34,972 FTE health personnel to meet increasing demand, an increase of 27% over present employment. By 1980, physicians will require the service of 1,017 medical office assistants and nursing aides in addition to those currently employed; 823 additional licensed vocational nurses; 693 additional registered nurses; 507 more medical technologists; 414 more radiologic technologists; and 3,078 additional non-professional and technical personnel.

NEWS

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment media	Original price 9-30-68	Current adjusted price 1-31-73[1]	% Change from 9-30-68
Mercantile National Bank Stock Fund	$10.25	$ 9.93	— 3.12
Loomis-Sayles Capital Development Fund	14.20	11.61	—18.24
T. Rowe Price Growth Stock Fund[2]	25.93	11.41	—12.03
Loomis-Sayles Mutual Fund	16.82	13.94	—17.12
Stein Roe & Farnham Balanced Fund	23.34	18.76	—19.62
Mercantile Bank Fixed Income Fund	10.00	11.59	+15.90
Standard & Poor 500 Stock Average	101.34	96.57	— 4.71
Dow Jones Industrial Average	935.79	855.55	— 8.57

[1]Includes accumulated dividends and capital gains since 1968.
[2]Stock split two for one, May, 1973.

CAPITAL COMMENTS

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

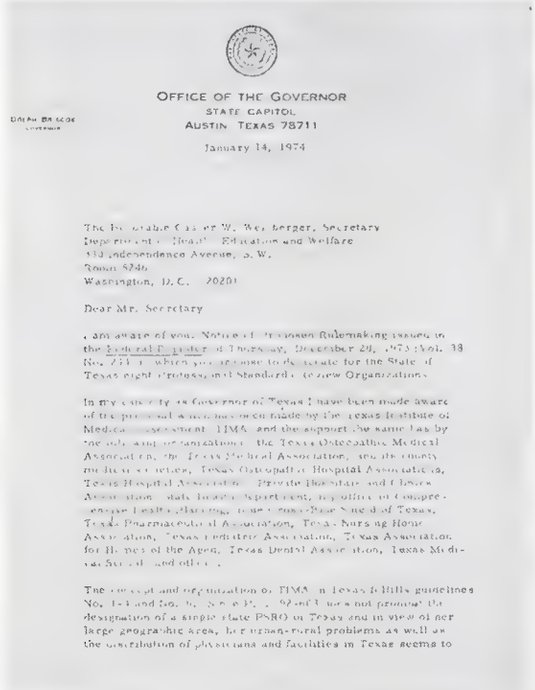
AUSTIN: Concerning the Department of Health, Education and Welfare's PSRO area designations, the following letter was sent by Texas Gov Dolph Briscoe to Caspar W. Weinberger, secretary of DHEW.

"Dear Mr. Secretary:

I am aware of your Notice of Proposed Rulemaking issued in the *Federal Register* of Thursday, Dec 20, 1973 (Vol. 38 No. 244) in which you propose to designate for the State of Texas eight Professional Standards Review Organizations.

In my capacity as Governor of Texas I have been made aware of the proposal which has been made by the Texas Institute for Medical Assessment (TIMA) and the support the same has by the following organizations: the Texas Osteopathic Medical Association, the Texas Medical Association and its county medical societies, Texas Osteopathic Hospital Association, Texas Hospital Association, Private Hospitals and Clinics Association, State Health Department, my office of Comprehensive Health Planning, Blue Cross-Blue Shield of Texas, Texas Pharmaceutical Association, Texas Nursing Home Association, Texas Pediatric Association, Texas Association for Homes of the Aged, Texas Dental Association, Texas Medical Schools and others.

The concept and organization of TIMA in Texas fulfills guidelines No. 1-4 and No. 6. Since PL 92-603 does not prohibit the designation of a single state



OFFICE OF THE GOVERNOR
STATE CAPITOL
AUSTIN, TEXAS 78711

January 14, 1974

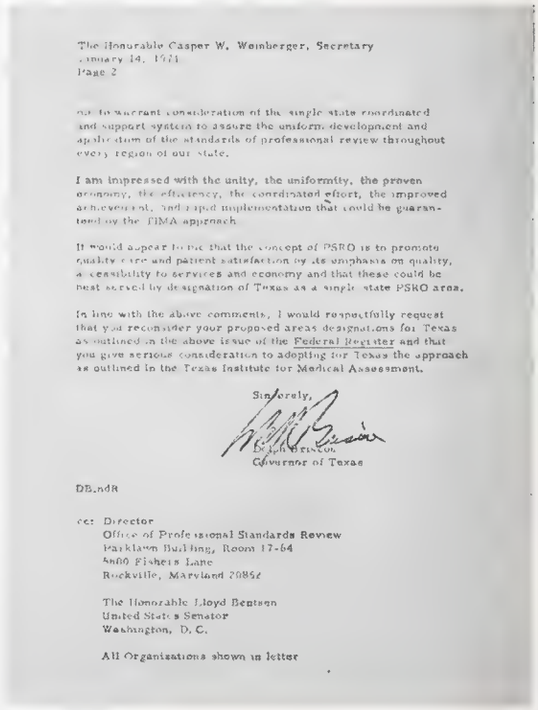
The Honorable Caspar W. Weinberger, Secretary
Department of Health, Education and Welfare
330 Independence Avenue, S.W.
Room 5246
Washington, D.C. 20201

Dear Mr. Secretary

I am aware of your Notice of Proposed Rulemaking issued in the Federal Register of Thursday, December 20, 1973 (Vol. 38 No. 244) in which you propose to designate for the State of Texas eight Professional Standards Review Organizations.

In my capacity as Governor of Texas I have been made aware of the proposal which has been made by the Texas Institute of Medical Assessment (TIMA) and the support the same has by the following organizations: the Texas Osteopathic Medical Association, the Texas Medical Association, and its county medical societies, Texas Osteopathic Hospital Associations, Texas Hospital Association, Private Hospitals and Clinics Association, State Health Department, my office of Comprehensive Health Planning, Blue Cross-Blue Shield of Texas, Texas Pharmaceutical Association, Texas Nursing Home Association, Texas Pediatric Association, Texas Association for Homes of the Aged, Texas Dental Association, Texas Medical Schools and others.

The concept and organization of TIMA in Texas fulfills guidelines No. 1-4 and No. 6. Since PL 92-603 does not prohibit the designation of a single state PSRO in Texas and in view of her large geographic area, her urban-rural problems as well as the distribution of physicians and facilities in Texas seems to



The Honorable Casper W. Weinberger, Secretary
January 14, 1974
Page 2

warrant consideration of the single state coordinated and support system to assure the uniform development and application of the standards of professional review throughout every region of our state.

I am impressed with the unity, the uniformity, the proven economy, the efficiency, the coordinated effort, the improved achievement, and rapid implementation that could be guaranteed by the TIMA approach.

It would appear to me that the concept of PSRO is to promote quality care and patient satisfaction by its emphasis on quality, accessibility to services and economy and that these could be best served by designation of Texas as a single state PSRO area.

In line with the above comments, I would respectfully request that you reconsider your proposed areas designations for Texas as outlined in the above issue of the Federal Register and that you give serious consideration to adopting for Texas the approach as outlined in the Texas Institute for Medical Assessment.

Sincerely,

Dolph Briscoe
Governor of Texas

DB:ndR

cc: Director
Office of Professional Standards Review
Parklawn Building, Room 17-64
5600 Fishers Lane
Rockville, Maryland 20852

The Honorable Lloyd Bentsen
United States Senator
Washington, D.C.

All Organizations shown in letter

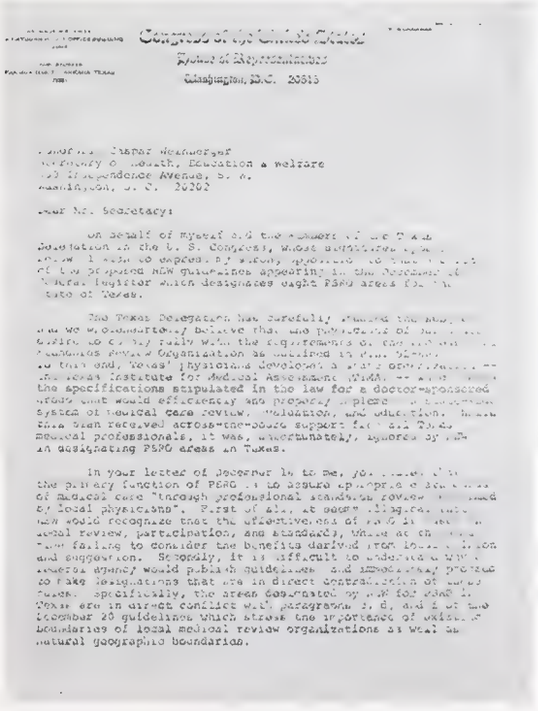
PSRO in Texas and in view of her large geographic area, her urban-rural problems as well as the distribution of physicians and facilities in Texas seems to me to warrant consideration of the single state coordinated and support system to assure the uniform development and application of the standards of professional review throughout every region of our state.

I am impressed with the unity, the uniformity, the proven economy, the efficiency, the coordinated effort, the improved achievement, and rapid implementation that could be guaranteed by the TIMA approach.

It would appear to me that the concept of PSRO is to promote quality care and patient satisfaction by its emphasis on quality, accessibility to services and economy and that these could be best served by designation of Texas as a single state PSRO area.

In line with the above comments, I would respectfully request that you reconsider your proposed area designations for Texas as outlined in the above issue of the *Federal Register* and that you give serious consideration to adopting for Texas the approach as outlined in the Texas Institute for Medical Assessment."

WASHINGTON: In addition to strong support from Sen John Tower and Sen Lloyd Bentsen relating to opposition to the PSRO area designations, the following letter was sent to DHEW and signed by the following 22 congressmen: Congressmen Wright Patman, George Mahon, Omar Burleson, Olin E. Teague,



Congress of the United States
House of Representatives
Washington, D.C. 20515

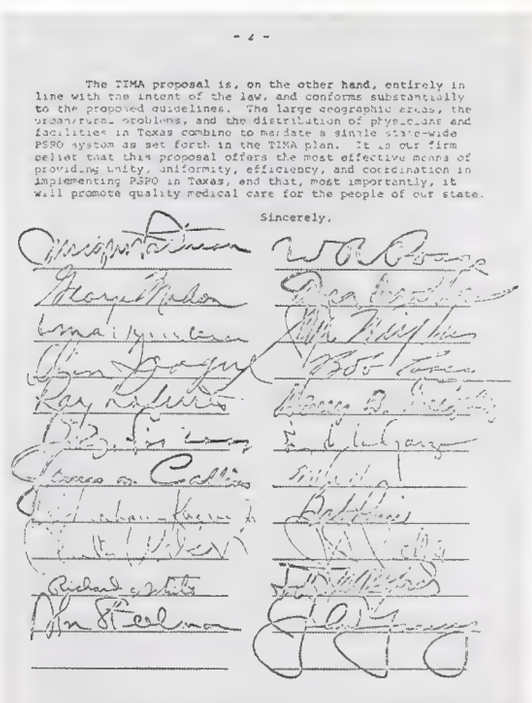
Honorable Caspar Weinberger
Secretary of Health, Education & Welfare
[illegible] Independence Avenue, S. W.
Washington, D. C. 20202

Dear Mr. Secretary:

On behalf of myself and the members of the Texas Delegation in the U. S. Congress, whose signatures [illegible] below I wish to express my strong opposition to that [illegible] of the proposed NEW guidelines appearing in the December [illegible] Federal Register which designates eight PSRO areas for the State of Texas.

The Texas Delegation has carefully studied the [illegible] and we wholeheartedly believe that the physicians of [illegible] desire to comply fully with the requirements of the [illegible] Standards Review Organization as outlined in [illegible]. To this end, Texas' physicians developed a state organization -- the Texas Institute for Medical Assessment (TIMA) -- [illegible] the specifications stipulated in the law for a doctor-sponsored group that would efficiently and properly implement a [illegible] system of medical care review, evaluation, and education. While this plan received across-the-board support from all Texas medical professionals, it was, unfortunately, ignored by NEW in designating PSRO areas in Texas.

In your letter of December 1[illegible] to me, you [illegible] the primary function of PSRO is to assure appropriate [illegible] of medical care "through professional standards review [illegible] by local physicians". First of all, it seems illogical that NEW would recognize that the effectiveness of PSRO [illegible] local review, participation, and standards, while at the [illegible] failing to consider the benefits derived from local [illegible] and suggestion. Secondly, it is difficult to understand why [illegible] federal agency would publish guidelines and immediately proceed to make designations that are in direct contradiction of these [illegible]. Specifically, the areas designated by NEW for PSRO in Texas are in direct conflict with paragraphs c, d, and f of the December 20 guidelines which stress the importance of existing boundaries of local medical review organizations as well as natural geographic boundaries.



- 2 -

The TIMA proposal is, on the other hand, entirely in line with the intent of the law, and conforms substantially to the proposed guidelines. The large geographic areas, the urban/rural problems, and the distribution of physicians and facilities in Texas combine to mandate a single state-wide PSRO system as set forth in the TIMA plan. It is our firm belief that this proposal offers the most effective means of providing unity, uniformity, efficiency, and coordination in implementing PSRO in Texas, and that, most importantly, it will promote quality medical care for the people of our state.

Sincerely,

Ray Roberts, O. C. Fisher, James M. Collins, Abraham Kazen, Charles Wilson, Richard White, Alan Steelman, W. R. Poage, Jack Brooks, Jim Wright, Bob Casey, Henry B. Gonzalez, Eligio de la Garza, Bill Archer, Robert Price, J. J. Pickle, Dale Milford, and John Young.

"Dear Mr. Secretary:

On behalf of myself and the Members of the Texas Delegation in the US Congress, whose signatures appear below, I wish to express my strong opposition to that section of the proposed HEW guidelines appearing in the Dec 20 *Federal Register* which designates eight PSRO areas for the State of Texas.

The Texas Delegation has carefully studied the subject, and we wholeheartedly believe that the physicians of our state desire to comply fully with the requirements of the Professional Standards Review Organization as outlined in PL 92-603. To this end, Texas' physicians developed a state organization—the Texas Institute for Medical Assessment (TIMA)—which meets the specifications stipulated in the law for a doctor-sponsored group that would efficiently and properly implement a state-wide system of medical care review, evaluation, and education. While this plan received across-the-board support from all Texas medical professionals, it was, unfortunately, ignored by HEW in designating PSRO areas in Texas.

In your letter of Dec 14 to me, you stated that the primary function of PSRO is to assure appropriate standards of medical care "through professional standards review performed by local physicians." First of all, it seems illogical that HEW would recognize that the effectiveness of PSRO is based on local review, participation, and standards, while at the same time failing to consider the benefits derived from local opinion and suggestion. Secondly, it is difficult to understand why a federal agency would publish guidelines and immediately proceed to make designations that are in direct contradiction of these rules. Specifically, the areas designated by HEW for PSRO in Texas are in direct conflict with paragraphs c, d, and f of the Dec 20 guidelines which stress the importance of existing boundaries of local medical review organizations as well as natural geographic boundaries.

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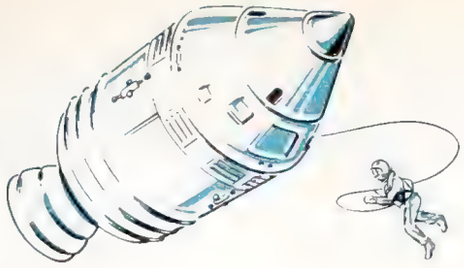
The Texas Medical Association is grateful for the support that the above elected public officials have given to its position on this subject.



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CONTINUING EDUCATION COURSES

MARCH

Cardiology: The University of Texas Health Science Center at Houston will sponsor a clinical cardiology course Mar 20-Dec 4 in Houston. Teaching method will be lecture. For more information, contact Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025.

Medicine: The Texas Academy of Family Physicians, Permian Basin Chapter, will hold its spring seminar Mar 29-30 at Indian Mountain Lodge, Davis Mountains State Park, Fort Davis, Tex. Fee for the seminar is $25, and it is accredited for 6 prescribed hours, TAFP. Contact: Dr. Wm Bart Pate, 202 N Second St, Alpine, Tex 79830.

Neuromuscular Disease: The second intensive course in neuromuscular diseases, sponsored by the Veterans Administration and Baylor College of Medicine, Houston, will be conducted at the Shamrock-Hilton Hotel, Houston, Mar 25-27, in cooperation with the National Institutes of Health. There is no registration fee and the course is open to all physicians and other interested medical personnel. Contact: Dr. William P Blocker, Jr, Chief, Rehabilitation Medicine Service, Veterans Administration Hospital, 2002 Holcombe Blvd, Houston 77031.

Ophthalmology: The Department of Ophthalmology at The University of Texas Medical Branch in Galveston will present its Eighth Annual Postgraduate Alumni Meeting Mar 30, at the Shriners Burns Institute in Galveston. Duration is one day with 8 total course hours. Fee: $25. Contact: Dr. John H. Brennan, Dept of Ophthalmology, The University of Texas Medical Branch, Galveston 77550.

Orthopedic Surgery: A course entitled "Adult Salvage Orthopaedics" is being sponsored by the American Academy of Orthopaedic Surgeons at the Ponderosa Motor Inn, Temple, Mar 25-27. Fee is $150 for physicians and $50 for residents with letter from chief. Contact: Department of Continuing Education, American Academy of Orthopaedic Surgeons, 430 N Michigan Ave, Chicago 60611.

Pathology: The Houston Society of Clinical Pathologists, in conjunction with Baylor College of Medicine, Houston, will present its 14th Annual Seminar entitled "Current Problems in Liver Disease" on Mar 30, 1974. The seminar will be held in the Main Auditorium, Baylor College of Medicine. Subjects to be discussed include viral hepatitis, hepatitis-associated antigen testing, clinical aspects and pathology of chronic active hepatitis, clinical aspects and pathology of primary biliary cirrhosis, hepatic tumors, and clinical laboratory testing in liver disease. Registration fee is $50. Contact: Dr. Jack L Titus, Baylor College of Medicine, Texas Medical Center, Houston 77025, Seminar Chairman.

Surgery: The American College of Surgeons will hold its second annual spring meeting in Houston Mar 25-28 at the Albert Thomas Convention Center and Hyatt Regency Hotel. Postgraduate courses will cover fluids and electrolytes, cardiovascular surgery, cancer, plastic surgery, shock, gastrointestinal surgery, surgery of the hand, and urologic surgery. The courses are accredited for Category I, AMA Physician's Recognition Award, and fee is $40. Contact: American College of Surgeons, 55 E Erie St, Chicago 60611.

APRIL

Anesthesiology: "Clinical Anesthesiology for General Practitioners" will include demonstrations and discussions on airway management, resuscitation and tracheal intubation, intravenous supplements to general anesthesia, management of problems in clinical anesthesia, practical nerve block and toxicity of local anesthetic agents, and preoperative and postoperative management of anesthetic complications. The course is sponsored by the University of Oklahoma Health Sciences Center and will be held Apr 22-26 in Oklahoma City. Contact: Office of Continuing Medical Education for Physicians, University of Oklahoma Health Sciences Center, PO Box 26901, Oklahoma City 73190.

Anesthesiology: A course entitled "Anesthesia for Open Heart Surgery" is being held Apr 4-6 at Texas Heart Institute, 6720 Bertner, Houston. Cosponsored by the Texas Heart Institute and Baylor College of Medicine, the course will last three days and a fee of $75 will be charged. Teaching methods include audiovisual materials, procedure observation, lecture, and open question and panel discussions. Contact: Dr. A Romagnoli, Asst Professor, Baylor College of Medicine, Texas Medical Center, Houston 77025.

Arthritis: The 10th Annual Orthopedic Symposium of St Luke's Episcopal Hospital and Baylor College of Medicine, Houston, presents "Surgical Treatment of Arthritis" Apr 25-27 at the Warwick Hotel, Houston. Faculty will include Dr. Mack L. Clayton, Denver; Dr. William R. Murray, San Francisco; Dr. Lowell F. A. Peterson, Rochester, Minn; Dr. Kauko Vainio, Heinola, Finland; and Dr. Martin Lidsky, Houston. Registration fee: $100 ($50 for residents with letter from chief). Contact: Dr. Sherwin Siff, 208 Hermann Professional Bldg, Houston 77025.

Asthma: A postgraduate course on asthma will be presented Apr 19-20 by The University of Texas Health Science Center at San Antonio and the San Antonio Collaborative Asthma Study Group. Purpose of the symposium is to discuss those aspects of asthma which are treatable and preventable. Emphasis will be on clinical application of new knowledge, including utilization of a new drug. The program is acceptable for 12 prescribed hours by the AAFP and Category I, AMA Physician's Recognition Award. Registration fee is $30. Contact: C A Stewart, Jr, PhD, Director

Office of Continuing Education Services, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284.

Hypnosis: The American Society of Clinical Hypnosis-Education and Research Foundation will conduct a workshop on "The Fundamentals of Clinical Hypnosis" in San Antonio Apr 4-7. It will be directed by Dr. M Erik Wright, professor, Dept of Psychology and Psychiatry at the University of Kansas. Registration fee is $125, and the course is accredited for Category I, AMA Physician's Recognition Award. Contact: F D Nowlin, American Society of Clinical Hypnosis, 800 Washington Ave SE, Minneapolis 55414, Exec Sec.

Medical Writing: A course on writing for scientific journals is being co-sponsored by the American Medical Writers Association and A Webb Roberts Center, Dallas, Apr 20, in Beasley Auditorium, Baylor Medical Center, Dallas. Dr. Charles G Roland, former senior editor of *JAMA*, will be guest speaker, and topics to be covered include common writing faults, organizing medical reports, preparing an abstract, and submitting the manuscript. Fee is $50; $25 for residents. Contact: Dr. George J Race, Dean, A Webb Roberts Center, 3500 Gaston Ave, Dallas 75246.

Ophthalmology: The University of Texas Medical School at Houston Program in Ophthalmology presents a symposium on Posterior Uveitis Apr 13, at Hermann Hospital, Houston. Guest speakers featured on the program are Dr. G Richard O'Connor, associate professor and director of the Proctor Foundation, dept of ophthalmology, the University of California at San Francisco; Dr. Morton L Rosenthal, director, The Retinal Service, New York Eye and Ear Infirmary; Dr. Charles E Russo, clinical associate professor, dept of ophthalmology, The University of Texas Medical School at Houston; and Dr. Theodore F Schlaegel, Jr, professor of ophthalmology and director of uveitis service, dept of ophthalmology, Indiana University School of Medicine. Registration fee is $15. Contact: Dr. Charles Russo, 1121 Hermann Professional Bldg, Houston 77025.

Preventive Medicine: Multiphasic Health Screening: Principles and Practice is the title of a course being presented by Xerox Center for Health Care Research and Baylor College of Medicine in Houston during April. A minimum enrollment of five is required, and fee is $200. Contact: Dr. Harry S Lipscomb, Professor, Community Medicine, Baylor College of Medicine, Texas Medical Center, Houston 77025.

Psychiatry: Baylor College of Medicine will sponsor a course in family therapy Apr 6-7 in Houston. Audiovisual materials, procedure observation, lecture, live clinic, and seminar will be used as teaching methods. Contact: Dr. David A Freedman, Dept of Psychiatry, Baylor College of Medicine, Texas Medical Center, Houston 77025.

MAY

Biomedical Sciences: The Institute for the Medical Humanities of The University of Texas Medical Branch at Galveston announces the first trans-disciplinary symposium on the interface of philosophy and medicine, "Evaluation and Explanation in the Biomedical Sciences." It will convene May 9-11 and is composed of six sessions. Program announcements and additional information may be obtained from Dr. H Tristram Engelhardt, Jr, UT Medical Branch, Galveston 77550.

Cardiography: Electrocardiographic Interpretation of Cardiac Arrhythmias is a program designed to meet the needs for an intensive review for those physicians who employ electrocardiograms in the diagnosis and management of their patients. The course is being presented by The University of Texas Health Science Center at Houston and will be given on board the new M/S Southward, a 17,000 ton ship of the Norwegian Caribbean Lines. The cruise will depart from Galveston May 19 and return May 26. The program is acceptable for 20 prescribed hours by the AAFP and Category I, AMA Physician's Recognition Award. Contact: Harvey Travel, Inc, PO Box 13376, Houston 77019.

Non-narcotic Drug Abuse: A program in the treatment of non-narcotic drug abuse is to be presented in Houston, May 20-23, at the Marriott Motor Hotel. Sponsored by the Institute of Clinical Toxicology, Houston, it will emphasize the drugs that are abused, the patients who abuse them, and treatment techniques in current use. Contact: Dr. Eric G Comstock, Institute of Clinical Toxicology, PO Box 2565, Houston 77001.

Pediatrics: Pediatric radiology, pediatric surgery, and general pediatrics are topics to be covered during the postgraduate pediatrics course being sponsored by The University of Texas Health Science Center at San Antonio May 4-5. The course will be held at The University of Texas Medical School at San Antonio and is accredited for 8 hours AAFP and Category I, AMA Physician's Recognition Award. No fee will be charged. Contact: Dr. Howard A Britton, Clinical Professor, Dept of Pediatrics, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284.

Sexual Counseling: Two therapists with experience in the treatment of sexual disorders will be featured during a workshop in sexual counseling, sponsored by The University of Texas Health Science Center at San Antonio, May 4, in San Antonio. Focus will be on the clinical management and successful counseling techniques used for clients with impotence, frigidity, and sexual incompatibility. Fee: $20; credit: 6 hours AAFP, and Category I, AMA Physician's Recognition Award. Contact: Dr. Harry Croft, Clinical Assistant Professor, Dept of Psychiatry, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284.

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Usual Adult Dosage: For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg.
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Rondomycin®
(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.
WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**
Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)
Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.
Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)
All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.
Tetracyclines are present in milk of lactating women taking tetracyclines.
To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.
Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).
Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.
Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.
USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.
For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.
Eaton Agent pneumonia: 900 mg daily for six days.
Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.
Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.
Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.
In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses
In streptococcal infections, a therapeutic dose should be given for at least 10 days.
SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

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The Weight of Professional Opinion

It's time for action to defend the laws and regulations that protect your patients against drug substitution.

These professional and trade organizations are united in supporting antisubstitution statutes and regulations:

The American Academy of Dermatology

The Board of Directors of the American Academy of Family Physicians

The Executive Board of the American Academy of Neurology

The Committee on Drugs of the American Academy of Pediatrics

The American College of Allergists

The Executive Committee of the American College of Obstetricians and Gynecologists

The Board of Regents of the American College of Physicians

The Board of Trustees of the American Dental Association

The Board of Trustees of the American Medical Association

The American Psychiatric Association

The Executive Committee of the National Association of Retail Druggists

The Board of Directors of the Pharmaceutical Manufacturers Association

The National Wholesale Druggists' Association

Joint Statement on Antisubstitution Laws and Regulations

The purpose of this statement is to affirm the support of the participating organizations for the laws, regulations and professional traditions which prohibit the unauthorized substitution of drug products.

Traditionally, physicians, dentists and pharmacists have worked cooperatively to serve the best interests of patients. Productive cooperation has been achieved through mutual respect as well as a common concern for the ideals of public service. This mutual respect has been reflected, in part, by joint support over the years for the adoption and enforcement of laws and regulations specifically prohibiting unauthorized substitution and encouraging joint discussion and selection of the source of supply of drug products. The basic principles of medical, dental and pharmacy practice are thus utilized and preserved in the interest of patient welfare.

The antisubstitution laws have not obstructed enhancement of the professional status of pharmacy any more than they have in and of themselves guaranteed absolute protection from unsafe drugs, or freed physicians, dentists and pharmacists from their responsibilities to patients. As a practical matter, however, such laws and regulations encourage interprofessional communications regarding drug product selection and assure each profession the opportunity to exercise fully its expertise in drug usage, to the advantage of patients.

Physicians and dentists should be urged to increase the frequency and regularity of their contacts with pharmacists in selection of quality drug products, recognizing that economies to patients can be improved through such communication, taking into account the patients' needs. The pharmacist's knowledge of the chemical characteristics of drugs, their mode of action, toxic properties and other characteristics that assist in making drug selection decisions should be utilized to the fullest extent practicable by physicians and dentists in serving their patients.

Since drug product selection entails knowledge derived from clinical experience, the physician's and dentist's roles in product selection remain primary and do not permit delegation of decisions requiring medical and dental judgments. A broader role in therapy will evolve for pharmacists as improved understanding and cooperation among the professions continue to grow.

There has been no evidence that there are convincing reasons to modify or repeal existing laws and regulations prohibiting the unauthorized substitution of another drug product for the one specified by a prescriber. It is our belief that such laws and regulations merit the joint support of the medical, dental and pharmaceutical professions and the pharmaceutical industry.

Add your opinion to the weight of other professionals and send it to your state assemblyman or legislator.

Pharmaceutical Manufacturers Association
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Placidyl®
(ETHCHLORVYNOL)

Brief Summary

Indications—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

Contraindications—Drug hypersensitivity and porphyria.

Warnings—Not recommended during the first and second trimester of pregnancy. Caution patients of possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in blurring of vision, paralysis of accommodation and profound hypnosis. Caution patients concerning driving a motor vehicle, operating machinery, or other hazardous operations requiring alertness after taking the drug. ADMINISTER WITH CAUTION TO PATIENTS WITH SUICIDAL TENDENCIES AND DO NOT PRESCRIBE LARGE QUANTITIES OF THE DRUG. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY OVER A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible early withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, slurring of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other less well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

Precautions—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitryptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient giddiness or ataxia may occur.

Adverse Reactions—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, dizziness, facial numbness, and allergic reaction typified by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 304431

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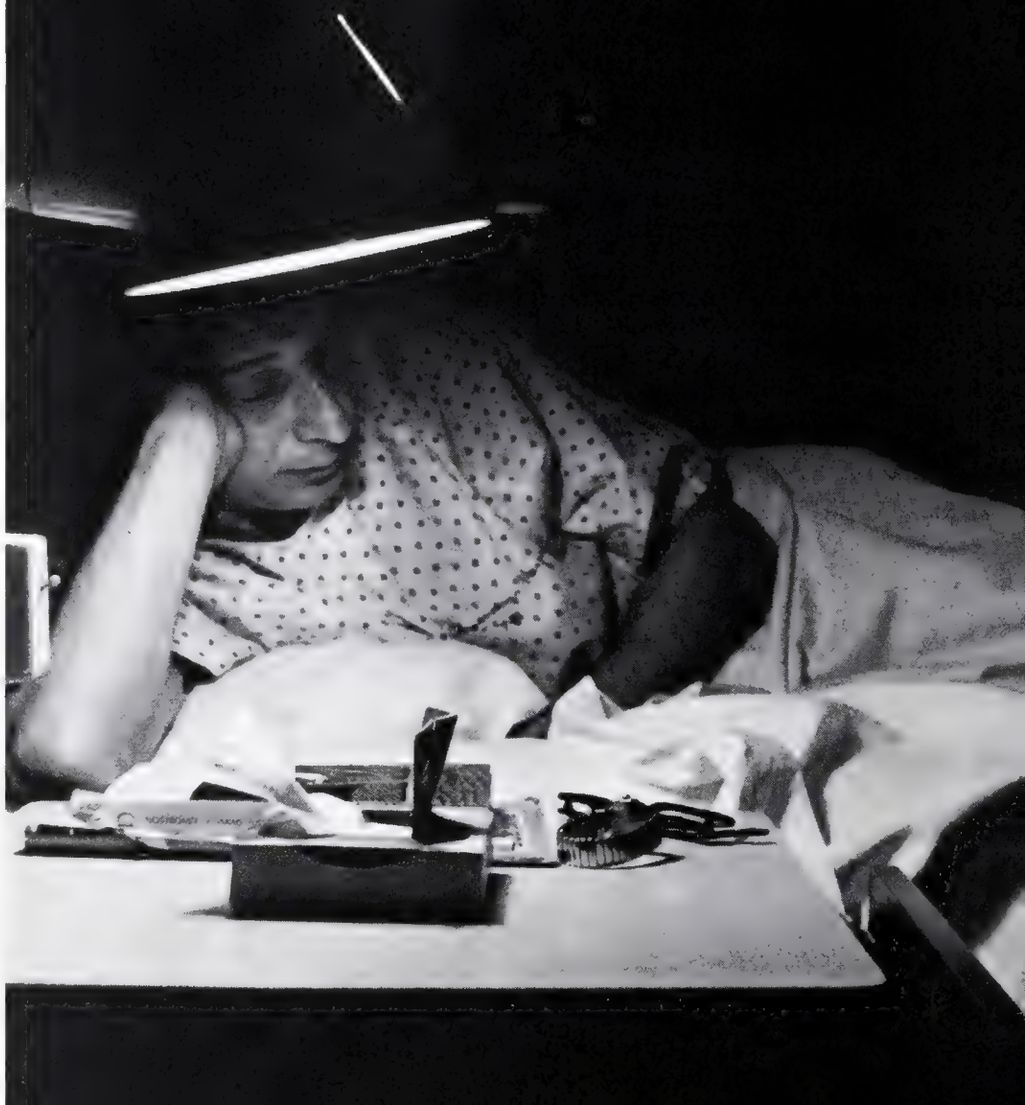

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COMING MEETINGS

AMERICAN CANCER SOCIETY

The American Cancer Society is presenting its National Conference on Childhood Cancer May 16-18 at the Fairmont Hotel, Dallas. Purpose of this conference is to alert the medical community to the progress being made in the diagnosis and treatment of childhood cancer and to emphasize the need for early diagnosis and the importance of prompt treatment by a team of medical specialists and allied health personnel. Pre-registration is requested, and there is no registration fee.

Contact: American Cancer Society's National Conference on Childhood Cancer, 219 E 42nd St, New York 10017.

NATIONAL STUDENT RESEARCH FORUM

The National Student Research Forum, sponsored by The University of Texas Medical Branch at Galveston and the Student American Medical Association, is scheduled for Apr 24-27 at the Galveston Holiday Inn. This Forum is the only national student scientific assembly of its kind in the country. Awards are presented in the categories of neurology and psychiatry, liver and liver disease, cardiovascular research, infectious disease and immunity, and general excellence in medical research. In addition to research presentations, the Forum features two physicians as guest speakers. Dr. Eugene Braunwald, Hershey professor and head of the department of medicine, Harvard Medical School, Peter Bent Brigham Hospital, will deliver the Dr. Benedict Abreu Memorial Address; and Dr. Robert S. Stone, director, National Institutes of Health, Bethesda, Md, will present the Keynote Address.

Contact: The University of Texas Medical Branch, Room 207 Libbie Moody Thompson Basic Science Building, Galveston 77550.

TEXAS ACADEMY OF FAMILY PHYSICIANS VALLEY CHAPTER

The Seventh Medical-Surgical Conference of the Rio Grande Valley, presented by Texas Academy of Family Physicians Valley Chapter, will be held Mar 28-30, at the Brownsville Civic Center, Brownsville. The program will include discussions on diabetes and obesity; uses of nuclear medicine in screening intracranial abnormalities, sensible digitalis maintenance, cardiac myopathies, diagnosis of cerebrovascular disease, myocardial revascularization procedures, prevention of strokes by medical and surgical means, psychosocial aspects of medical care for Mexican-Americans, and history of the study of sexuality. Registration fee, $50.

Contact: Dr. Leon Keeble, Medical-Surgical Conference, 525 Villa Maria Blvd, Brownsville, 78520.

CURRENT MEETINGS IN TEXAS

AMERICAN COLLEGE OF SURGEONS will provide eight postgraduate courses during its spring meeting in Houston Mar 25-28. Headquarters for the meeting will be the Albert Thomas Convention Center and the Hyatt Regency Hotel. Postgraduate courses will cover fluids and electrolytes; cardiovascular surgery; cancer; plastic surgery; shock; gastrointestinal surgery; surgery of the hand; and urologic surgery. For registration fees and information contact: American College of Surgeons, 55 E Erie St, Chicago 60611.

CENTER FOR RESEARCH IN WATER RESOURCES, College of Engineering, The University of Texas at Austin, will present the seventh in the Water Resources Symposia Series Apr 1-3 at the Joe C. Thompson Conference Center, Austin. Entitled, "Virus survival in water and wastewater systems," the symposium will include sessions on virus concentration techniques, virus inactivation in biological systems, virus inactivation during physical and chemical treatment, virus survival in the marine environment, and virus survival in terrestrial systems. For additional information contact: Engineering Institutes, c/o Division of Extension, PO Box K, The University of Texas at Austin, Austin 78712.

TEXAS SOCIETY OF CHILD PSYCHIATRY will meet Apr 25-28 at Lakeway Inn near Austin. Contact: Dr. William Patrick Moore, 2210 Maroneal, Suite 300, Houston 77025, Pres.

For other courses and symposiums, see Continuing Education Courses, pp 33-34.

TEXAS STATE BOARD OF EXAMINERS IN THE BASIC SCIENCES will hold its next examination Apr 19-20 in Galveston, Houston, and Lubbock. Applications for the April examination must be submitted by Mar 18 and all necessary information and documents required of examinees by the Board must be completed and in the applicant's file by that date. Details as to time and place may be obtained by writing to the Executive Secretary, Texas State Board of Examiners in the Basic Sciences, 1012 Sam Houston State Office Bldg, 201 E 14th St, Austin 78701.

TEXAS UROLOGICAL SOCIETY is holding its 1974 meeting at the Green Oaks Inn, Fort Worth, Apr 4-6. Featured speakers for the scientific program include Dr. Richards P. Lyons and Dr. Victor Politano. Registration fee: $75, doctors; $40, wives. Contact: Dr. Hugh Lamensdorf, PO Box 11340, Fort Worth 76109, Sec-treas.

UNIVERSITY ASSOCIATION FOR EMERGENCY MEDICAL SERVICES has scheduled its annual business and formal meeting May 28-June 1 at the Sheraton Dallas Hotel, Dallas. The program will consist of the "Robert H. Kennedy Lectureship in Emergency Medical Care;" and two panel sessions, Emergency Medicine as a Specialty and Cardiac Telemetry. Registration fee: $60. Contact: University Association for Emergency Medical Services, PO Box 1241, East Lansing, Mich 48823.

VETERANS ADMINISTRATION HOSPITAL and Baylor College of Medicine will cosponsor "The Second Intensive Course in Neuromuscular Diseases" Mar 25-27 at the Shamrock-Hilton Hotel, Houston. There is no registration fee and the course is open to all physicians and other medical personnel. Contact: Dr. William P Blocker, Jr, Veterans Administration Hospital, 2002 Holcombe Blvd, Houston 77031.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF NEUROLOGY's 26th Annual Meeting is scheduled Apr 22-27 at the St Francis Hotel, San Francisco. Special courses offered during the meeting include such topics as neuroanatomy, neurophysiology, neurochemistry, neuropharmacology, clinical electroencephalography, cerebrospinal fluid, neuropathology, neuroradiology, scientific basis of neurology, and practical clinical neurology. Complete registration material for courses and scientific sessions may be obtained from American Academy of Neurology, 4005 W 65th St, Minneapolis 55435.

AMERICAN ACADEMY OF PEDIATRICS' Spring Session will be held Apr 22-24 in Bal Harbour, Fla. The program will include discussions on learning disabilities, pediatric nephrology, pediatric neurology, pediatric hematology, gynecological problems in childhood, trauma, primary care of the burned child, hypertension in childhood, pediatric dermatology, pediatric ophthalmology, management of pediatric emergencies, and communication with the adolescent patient. Contact: Dr. Robert G Frazier, American Academy of Pediatrics, 1801 Hinman Ave, Evanston, Ill 60204, Exec Off.

AMERICAN BOARD OF FAMILY PRACTICE will give its next two-day written certification examination on Oct 19-20. It will be held in five centers geographically distributed throughout the United States. Each physician desiring to take the examination must file a completed application with the Board office prior to June 15, 1974. Information regarding the examination may be obtained by writing Dr. Nicholas J Pisacano, American Board of Family Practice, University of Kentucky Medical Center, Annex 2, Room 229, Lexington, Ky 40506, Sec.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS will meet Apr 27-May 2 at Las Vegas Convention Center, Las Vegas. Fourteen professors from throughout the United States and Canada have been invited to present current thinking on more common and important problems in the specialty. Special interest meetings will also be held with a specialist with known involvement and expertise in each subject designated to enlist the participation of persons known to be interested in the subject. Papers on current clinical and basic investigation will be presented and there will also be round table discussions. Contact: American College of Obstetricians and Gynecologists, One E Wacker Dr, Chicago 60601.

AMERICAN COLLEGE OF SURGEONS' Committee on Trauma is sponsoring a seminar on life saving measures for the critically injured. The course will be held Mar 27-30 in Tampa, Fla, and is designed to increase the knowledge and skills of physicians who are first confronted with such patients in rural, suburban, and urban hospitals. The curriculum will stress established methods of assessing life-threatening injuries and their treatment. Serious head, thoracic, abdominal, genitourinary and arterial injuries will also be discussed, as well as shock due to hemorrhage, and the delayed pulmonary and renal complications of trauma. Contact: Trauma Division, ACS, 55 E Erie St, Chicago 60611.

AMERICAN INDUSTRIAL HEALTH CONFERENCE, cosponsored by the Industrial Medical Association and American Association of Industrial Nurses, will meet at the Americana Hotel, Bal Harbour, Fla, Apr 28-May 2. The program will include both scientific and technical exhibits, postgraduate seminars, and workshops in selected areas of occupational medical practice. Contact: American Industrial Health Conference, 150 N Wacker Dr, Chicago 60606.

AMERICAN MEDICAL ASSOCIATION, Council on Rural Health, is sponsoring its National Conference on Rural Health Apr 25-26 at the Detroit Hilton Hotel, Detroit. Goals of the conference are to assess the use of all resources in planning for and implementing health care delivery systems: to examine the recruitment, education, and utilization of rural health manpower; to understand the function and development of a rural emergency medical service system; and to study a strategy for making rural health care services available and accessible. Registration fee is $25 and includes a luncheon and evening reception, cassette highlights of the program, and take-home materials. Students are exempt from registration fee. The program is also acceptable for 10 prescribed hours by the AAFP. Contact: Council on Rural Health, Dept of Rural Health, Div of Medical Practice, AMA, 535 N Dearborn St, Chicago 60610.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS will hold its 15th annual clinical congress Mar 30-Apr 3 at Caesar's Palace, Las Vegas, Nev. A postgraduate course on updating abdominal surgery will be presented Saturday, Mar 30, and tuition is $35. The clinical congress will begin Sunday, Mar 31, with registration fee $25 for members, and $85 for nonmembers. Contact: Clinical Congress of Abdominal Surgeons, 675 Main St, Melrose, Mass 02176.

NATIONAL COUNCIL ON ALCOHOLISM announces the National Alcoholism Forum to be held Apr 28-May 3 at the Denver Hilton Hotel, Denver. The format of the program will provide for dissemination of information, special reports of national and international interest, setting goals for the future, special problem area workshops, discussion of current issues, and advances in the medical-scientific field. Contact: Mrs. Ann Milata, National Council on Alcoholism, Inc, 2 Park Ave, New York, NY 10016, National Alcoholism Forum Coordinator.

THIRD ANNUAL THYROID SYMPOSIUM, sponsored by USAF Academy Hospital, Colorado, will be conducted at the Broadmoor Hotel, Colorado Springs, May 4. The program is the third in a continuing series of symposia for the physician, emphasizing recent developments in thyroid physiology, diagnosis, and treatment. Contact: Dr. Frederick R. Gydesen, Director of Nuclear Medicine, Penrose Hospital, 2215 N Cascade Ave, Colorado Springs 80907, Symposium Dir.

Calendar of Listings

■ Denotes Texas Meetings

APRIL

AMERICAN ACADEMY OF FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY, Palm Beach, Fla, Apr 20-22, 1974. Dr. Carl N Patterson, 1110 W Main St, Durham, NC, Exec Off.

AMERICAN ASSOCIATION OF ANATOMISTS, Cleveland, Apr 1-4, 1974. Dr. John E Pauly, Dept of Anatomy, University of Arkansas Medical Center, Little Rock 72201.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Las Vegas, Apr 22-24, 1974. William T Maloney, AATS, 6 Beacon St, Suite 620, Boston 02108, Exec Sec.

AMERICAN COLLEGE OF ALLERGISTS, Paris, France, Apr 16-24, 1974. Dr. John D Gillaspie, 2141 14th St, Boulder, Colo, Sec-Treas.

■ **AMERICAN COLLEGE HEALTH ASSOCIATION, Dallas, Apr 2-5, 1974. James W Dilley, 2807 Central, Evanston, Ill 60201, Exec Dir.**

AMERICAN COLLEGE OF PHYSICIANS, New York, Apr 1-5, 1974. Dr. Edward C Rosenow, Jr, ACP, 4200 Pine St, Philadelphia 19104, Exec VPres.

AMERICAN COLLEGE OF RADIOLOGY, New Orleans, Apr 1-5, 1974. William C Stronach, 20 N Wacker Dr, Rm 2920, Chicago 60606, Exec Dir.

AMERICAN MEDICAL SOCIETY ON ALCOHOLISM, Denver, Apr 26-27, 1974. Dr. Sidney S Greenberg, 6 E 69th St, New York 10028, Sec.

NATIONAL COUNCIL ON ALCOHOLISM, INC, Denver, Apr 28-May 3. National Council on Alcoholism, Inc, 2 Park Ave, Suite 1720, New York 10016.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS, INC, New York, Apr 18, 1974. Ms. Virginia S Boyce, 79 Madison Ave, New York 10016, Exec Dir.

SOUTHWESTERN SURGICAL CONGRESS, Monterey, Calif, Apr 29-May 2, 1974. Dr. Jack A Barney, 708 Physicians & Surgeons Bldg, Oklahoma City 73103, Sec-Treas.

■ TEXAS DENTAL ASSOCIATION, Dallas, Apr 28-May 1, 1974. Dr. Joe C Carrington, Jr, 4920 N Interregional Hwy, Austin 78751.

MAY

AEROSPACE MEDICAL ASSOCIATION, Washington, DC, May 6-9, 1974. Dr. Merrill H Goodwin, ASMA, Washington National Airport, Washington, DC 20001, Exec Sec.

AMERICAN ASSOCIATION OF PLASTIC SURGEONS, Seattle, May 12-16, 1974. Dr. Nicholas Georgiade, Box 3098, Duke University Medical School, Durham, NC 27706, Sec.

■ **AMERICAN COLLEGE OF CHEST PHYSICIANS, TEXAS CHAPTER, Houston, May 1974. Dr. Byron N Dooley, 7711 Louis Pasteur, San Antonio 78229, Pres.**

■ AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, TEXAS CHAPTER, Houston, May, 1974. Dr. Robert S Browne, 607 Woolworth, Port Arthur 77640, State Dir.

■ AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER, Dallas, May 18, 1974. Dr. Ronald Jones, 5323 Harry Hines Blvd, Dallas 75235, Sec.

AMERICAN GASTROENTEROLOGICAL ASSOCIATION, San Francisco, May 19-25, 1974. Charles B Slack, 6900 Grove Rd, Thorofare, NJ 08086, Exec Sec.

■ AMERICAN MEDICAL WRITERS ASSOCIATION, SOUTHWESTERN CHAPTER, Houston, May 11, 1974. Ms. Judy Ingram, Scott and White Clinic, Temple 76501, Sec.

■ **AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, Galveston, May 24-26, 1974. Geraldine Midgley, PO Box 1287, Uvalde 78801, Exec Sec.**

AMERICAN PSYCHIATRIC ASSOCIATION, Detroit, May 6-10, 1974. Dr. Walter E Barton, 1700 18th St, NW, Washington, DC 20009, Med Dir.

■ **AMERICAN PSYCHIATRIC ASSOCIATION, TEXAS DISTRICT BRANCH, Houston, May 11, 1974. Mrs. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701, Exec Sec.**

AMERICAN SOCIETY OF COLON AND RECTAL SURGEONS, Washington, DC, May 22-25, 1974. Ms. Harriette Gibson, 320 W Lafayette, Detroit, Mich 48226, Admin Sec.

AMERICAN SOCIETY OF INTERNAL MEDICINE, San Francisco, May 2-5, 1974. William R Ramsey, 535 Central Tower Bldg, Third and Market Sts, San Francisco 94103, Exec Dir.

AMERICAN THORACIC SOCIETY, Cincinnati, Ohio, May 12-15, 1974. Robert G Weymueller, 1749 Broadway, New York 10019, Exec Dir.

AMERICAN UROLOGICAL ASSOCIATION, St Louis, Mo, May 19-23, 1974. Richard J Hannigan, 1120 N Charles St, Baltimore, Md 21201, Exec Off.

■ **CONFERENCE OF CITY AND COUNTY HEALTH OFFICERS, Houston, May, 1974. Dr. J E Peavy, Commissioner of Health, Texas State Dept of Health, 1100 W 49th St, Austin 78756.**

■ INTERNATIONAL COLLEGE OF SURGEONS, TEXAS STATE SURGICAL DIVISION, Houston, May 9, 1974. Dr. Edward A Hanna, 6303 S Park Blvd, Houston 77021, Sec-treas.

■ **TEXAS AIR-MEDICS ASSOCIATION, Houston, May 9, 1974. Dr. C F Miller, PO Box 1338, Waco 78203, Sec-Treas.**

■ TEXAS ASSOCIATION OF PHYSICIANS IN NUCLEAR MEDICINE, Houston, May, 1974. Dr. Robert W Parkey, 5323 Harry Hines, Dallas 78235, Sec.

■ TEXAS DERMATOLOGICAL SOCIETY in conjunction with Mexican Dermatological Society, Houston, May 10-12, 1974. Dr. Don W Owens, 6624 Fannin, Houston 77025, Prog Chrmn.

■ TEXAS DIABETES ASSOCIATION, Houston, May, 1974. Dr. Eric A Orzeck, 918 Medical Towers, Houston 77025.

■ TEXAS INDUSTRIAL MEDICAL ASSOCIATION, Houston, May 10, 1974. Dr. John R Venable, Dow Chemical Co, Freeport 77541, Sec.

■ **TEXAS MEDICAL ASSOCIATION, Houston, May 8-12, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.**

■ **TEXAS OPHTHALMOLOGICAL ASSOCIATION, Houston, May 9-12, 1974, and European tour, May 12-31, 1974. Dr. C A Struve, PO Box 6374, Corpus Christi 78411.**

■ TEXAS ORTHOPAEDIC ASSOCIATION, Houston, May, 1974. Dr. John A Murray, 5401 Caroline, Houston 77004, Prog Chrmn.

■ TEXAS OTOLARYNGOLOGICAL ASSOCIATION, Houston, May, 1974. Dr. John W Youngblood, 505 Medical Park Tower, Austin 78705, Sec.

■ TEXAS PROCTOLOGIC SOCIETY, Houston, May 9, 1974. Dr. W Bailey, 712 N Washington, Dallas 75246.

■ TEXAS RHEUMATISM ASSOCIATION, Houston, May, 1974. Dr. J E Norris, 6448 Fannin, Houston 77025, Pres.

■ TEXAS SOCIETY OF ANESTHESIOLOGISTS, Houston, May, 1974. Dr. Cecil R Glass, 2525 Calder Ave, Beaumont 77702, Sec.

■ TEXAS SOCIETY OF ATHLETIC TEAM PHYSICIANS, Houston, May 10, 1974. Dr. Bobby L Stafford, 8 Medical Dr, Amarillo 79106, Sec.

■ TEXAS SOCIETY OF PLASTIC SURGEONS, Houston, May 9-11, 1974. Dr. Jeff Moore, PO Box 3755, Amarillo 79106, Sec.

JUNE

AMERICAN DIABETES ASSOCIATION, Atlanta, Ga, June 15-16, 1974. J Richard Connelly, American Diabetes Association, 18 E 48th St, New York 10017, Exec Dir.

AMERICAN MEDICAL ASSOCIATION, Chicago, June 22-27, 1974. Dr. Ernest B Howard, 535 N Dearborn St, Chicago 60610, Exec VPres.

AMERICAN NEUROLOGICAL ASSOCIATION, Boston, June 10-12, 1974. Dr. Samuel A Trufant, Cincinnati General Hospital, Cincinnati, Ohio 45229, Sec.

AMERICAN PHYSICAL THERAPY ASSOCIATION, Montreal, Can, June 14-22, 1974. Royce P Noland, 1156 15th St NW, Washington, DC 20005, Exec Dir.

ENDOCRINE SOCIETY, Atlanta, Ga, June 12-14, 1974. Mrs. Marcella M Branch, 1141 Classen Blvd, Suite 319, Oklahoma City 73106, Exec Sec.

■ MEDICAL LIBRARY ASSOCIATION, San Antonio, June 2-4, 1974. John S LoSasso, Medical Library Association, 919 N Michigan, Suite 3208, Chicago 60611, Exec Dir.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Austin, June 11, 1974. Dr. A Bryan Spires, Jr, 211 E 7th, Austin 78702, Exec Dir.

JULY

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Seattle, July 25-27, 1974. Mrs. Margaret H Henry, 36391 Maple Grove Rd, Willoughby Hills, Ohio 44094, Exec Sec.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, July 12-13, 1974. F C Schmidt, 1809 E 18th, Denver 80218, Exec Off.

■ TEXAS COMMISSION ON ALCOHOLISM, Austin, July 7-11, 1974. K E Beahan, 809 Sam Houston State Office Bldg, Austin 78701.

■ TEXAS PHARMACEUTICAL ASSOCIATION, Houston, July 21-25, 1974. Luther R Parker, R Ph, PO Box 4487, Austin 78701, Exec Dir.

SEPTEMBER

■ AMERICAN ACADEMY OF PEDIATRICS, TEXAS CHAPTER, El Paso, Sept 20, 1974. Dr. Paul Meyer, 3121 Procter, Port Arthur, Tex 77640, Sec.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, Denver, Sept 23-29, 1974. Dene R Murray, One E Wacker Dr, Suite 1510, Chicago 60601, Exec Dir.

AMERICAN ASSOCIATION OF MEDICAL CLINICS, Washington, DC, Sept 4-8, 1974. James B Cobb, PO Box 949, Alexandria, Va 22313, Exec Off.

AMERICAN ROENTGEN RAY SOCIETY, San Francisco, Sept 24-27, 1974. Dr. Ted F Leigh, Emory University Clinic, Atlanta, Ga 30322, Exec Sec.

■ BLACKFORD MEMORIAL LECTURES, Denison, Sept 7, 1974. Dr. John D Gleckler, 211 N Fannin, Denison 76020, Chrmn.

FLYING PHYSICIANS ASSOCIATION, Biloxi, Miss, Sept 22-27, 1974. Albert Carriere, 801 Green Bay Rd, Lake Bluff, Ill 60044, Business Counsel.

■ TEXAS PEDIATRIC SOCIETY, El Paso, Sept 19-21, 1974. Mrs. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

■ TEXAS MEDICAL ASSOCIATION, Austin, Sept 20-22, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

WORLD MEDICAL ASSOCIATION, Stockholm, Sweden, Sept 1-8, 1974. Ms. Margaret L Natwick, World Medical Association, 10 Columbus Circle, New York 10019, Exec Sec.

OCTOBER

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Los Angeles, Oct 14-17, 1974. Roger Tusken, American Academy of Family Physicians, 1740 W 92nd St, Kansas City, Mo 64112, Exec Dir.

■ AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Dallas, Oct 6-10, 1974. Dr. C M Kos, 15 Second St SW, Rochester, Minn 55901, Sec-Treas.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, Cincinnati, Oct 15-20, 1974. J J Garvey, 2317 W Jefferson St, Suite 208, Joliet, Ill 60435, Exec Sec.

■ AMERICAN ASSOCIATION OF OPHTHALMOLOGY, Dallas, Oct 5-10, 1974. Lawrence A Zupan, 1100 17th St NW, Washington, DC, 20036.

AMERICAN CANCER SOCIETY, New York City, Oct 14-18, 1974. Lane W Adams, 219 E 42nd St, New York 10017, Exec VPres.

AMERICAN COLLEGE OF SURGEONS, Miami Beach, Oct 21-25, 1974. Dr. C Rollins Hanlon, American College of Surgeons, 55 E Erie St, Chicago 60611, Dir.

AMERICAN DIETETIC ASSOCIATION, Philadelphia, Oct 7-11, 1974. Robert M Crum, JD, American Dietetic Association, 620 N Michigan Ave, Chicago 60611, Exec Dir.

AMERICAN FRACTURE ASSOCIATION, Atlanta, Oct 20-23, 1974. Dr. H W Wellmerling, 600 Livingston Bldg, Bloomington, Ill 61701, General Sec.

AMERICAN MEDICAL RECORD ASSOCIATION, San Francisco, Oct 13-17, 1974. Mrs. Mary Waterstraat, 815 N Michigan Ave, Suite 1850, Chicago 60611, Exec Sec.

■ AMERICAN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGEONS, Houston, Oct 27-Nov 1, 1974. Dallas Whaley, 29 E Madison, Chicago, Ill 60602, Exec VPres.

INTERNATIONAL CANCER CONGRESS, Florence, Italy, Oct 20-26, 1974. Dr. Murray M Copeland, M D Anderson Hospital and Tumor Institute, Houston 77025.

SOUTHERN PSYCHIATRIC ASSOCIATION, Hot Springs, Ark, Oct 5-8, 1974. Ms. Annette S Boutwell, PO Box 10387, Raleigh, NC 27605, Exec Sec.

NOVEMBER

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, San Francisco, Nov 16-19, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN ASSOCIATION OF BLOOD BANKS, Anaheim, Nov 9-14, 1974. Ms. Lois James, 1828 L St NW, Washington, DC 20036, Exec Sec.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, San Francisco, Nov 20-22, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN DENTAL ASSOCIATION, Washington, DC, Nov 10-14, 1974. C Gordon Watson, 211 E Chicago Ave, Chicago 60611, Exec Dir.

■ AMERICAN HEART ASSOCIATION, Dallas, Nov 18-23, 1974. William W Moore, 44 E 23rd St, New York 10010, Exec Off.

AMERICAN SOCIETY OF CYTOLOGY, New York, Nov 6-9, 1974. Dr. Warren R Lang, Health Sciences Center, 130 S 9th St, Suite 1006, Philadelphia 19105, Sec-treas.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, Chicago, Nov 10-14, 1974. Dr. John A D Cooper, One Dupont Circle, NW, Washington, DC 20036, Pres.

INTERNATIONAL COLLEGE OF SURGEONS, Portland, Ore, Nov, 1974. Dr. Virgil T DeVault, 1516 Lake Shore Dr, Chicago 60601, Exec Off.

MEDICAL SOCIETY OF THE US AND MEXICO, Guadalajara, Mex, Nov 6-10, 1974. Mrs. Virginia E Bryant, 333 W Thomas, No 207, Phoenix, Ariz 85013, Exec Sec.

SOUTHERN MEDICAL ASSOCIATION, Atlanta, Nov 17-20, 1974. Robert F Butts, 2601 Highland Ave, Birmingham 35210, Exec Dir.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, Galveston, Nov 9-13, 1974. Donald C Jackson, 1905 N Lamar Blvd, Austin 78705, Exec Dir.

■ TEXAS MEDICAL ASSOCIATION, Austin, Nov 2-3, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

■ TEXAS NURSING HOME ASSOCIATION, Houston, Nov 20-22, 1974. Sidney D Rich, 6225 Highway 290E, Austin 78723, Exec VPres.

■ TEXAS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Houston, Nov 1-2, 1974. Dr. Bert A DeBord, Scott and White Clinic, Temple 76501, Sec.

DECEMBER

AMERICAN MEDICAL ASSOCIATION, Portland, Ore, Dec 1-4, 1974. Dr. Ernest B Howard, 535 N Dearborn St, Chicago 60610, Exec VPres.

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"Probably" effective: For estrogen deficiency-induced osteoporosis, and only when used in conjunction with other important therapeutic measures such as diet, calcium, physiotherapy, and good general health-promoting measures. Final classification of this indication requires further investigation.

Contraindications: Short acting estrogens are contraindicated in patients with (1) markedly impaired liver function; (2) known or suspected carcinoma of the breast, except those cases of progressing disease not amenable to surgery or irradiation occurring in women who are at least 5 years postmenopausal; (3) known or suspected estrogen-dependent neoplasia, such as carcinoma of the endometrium; (4) thromboembolic disorders, thrombophlebitis, cerebral embolism, or in patients with a past history of these conditions; (5) undiagnosed abnormal genital bleeding.
Warnings: Estrogen therapy should not be given to women with recurrent chronic mastitis or abnormal mammograms except, if in the opinion of the physician, it is warranted despite the possibility of aggravation of the mastitis or stimulation of undiagnosed estrogen-dependent neoplasia.

The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, retinal thrombosis, cerebral embolism and pulmonary embolism). If these occur or are suspected, estrogen therapy should be discontinued immediately.

Estrogens may be excreted in the mother's milk and an estrogenic effect upon the infant has been described. The long range effect on the nursing infant cannot be determined at this time.

Hypercalcemia may occur in as many as 15 percent of breast cancer patients with metastases, and this usually indicates progression of bone metastases. This occurrence depends neither on dose nor on immobilization. In the presence of progression of the cancer or hypercalcemia, estrogen administration should be stopped.

A statistically significant association has been reported between maternal ingestion of diethylstilbestrol during pregnancy and the occurrence of vaginal carcinoma in the offspring. This occurred with the use of diethylstilbestrol for the treatment of threatened abortion or high risk pregnancies. Whether or not such an association is applicable to all estrogens is not known at this time. In view of this finding, however, the use of any estrogen in pregnancy is not recommended.

Failure to control abnormal uterine bleeding or unexpected recurrence is an indication for curettage.
Precautions: As with all short acting estrogens, the following precautions should be observed:

A complete pretreatment physical examination should be performed with special reference to pelvic and breast examinations.

To avoid prolonged stimulation of the endometrium and breasts in climacteric or hypogonadal women, estrogens should be administered cyclically (3 week regimen with 1 week rest period—withdrawal bleeding may occur during rest period).

Because of individual variation in endogenous estrogen production, relative overdosage may occur which could cause undesirable effects such as abnormal or excessive uterine bleeding, mastodynia and edema.

Because of salt and water retention associated with estrogenic anabolic activity, estrogens should be used with caution in patients with epilepsy, migraine, asthma, cardiac, or renal disease.

If unexplained or excessive vaginal bleeding should occur, reexamination should be made for organic pathology.

Pre-existing uterine fibromyomata may increase in size while using estrogens; therefore, patients should be examined at regular intervals while receiving estrogenic therapy.

The pathologist should be advised of estrogen therapy when relevant specimens are submitted.

Because of their effects on epiphyseal closure, estrogens should be used judiciously in young patients in whom bone growth is incomplete.

Prolonged high dosages of estrogens will inhibit anterior pituitary functions. This should be borne in mind when treating patients in whom fertility is desired.

The age of the patient constitutes no absolute limiting factor, although treatment with estrogens may mask the onset of the climacteric.

Certain liver and endocrine function tests may be affected by exogenous estrogen administration. If test results are abnormal in a patient taking estrogen, they should be repeated after estrogen has been withdrawn for one cycle.
Adverse Reactions: The following adverse reactions have been reported associated with short acting estrogen administration:
nausea, vomiting, anorexia
gastrointestinal symptoms such as abdominal cramps and bloating
breakthrough bleeding, spotting, unusually heavy withdrawal bleeding (See DOSAGE AND ADMINISTRATION)
breast tenderness and enlargement
reactivation of endometriosis
possible diminution of lactation when given immediately postpartum
loss of libido and gynecomastia in males
edema
aggravation of migraine headaches
change in body weight (increase, decrease)
headache
allergic rash
hepatic cutaneous porphyria becoming manifest
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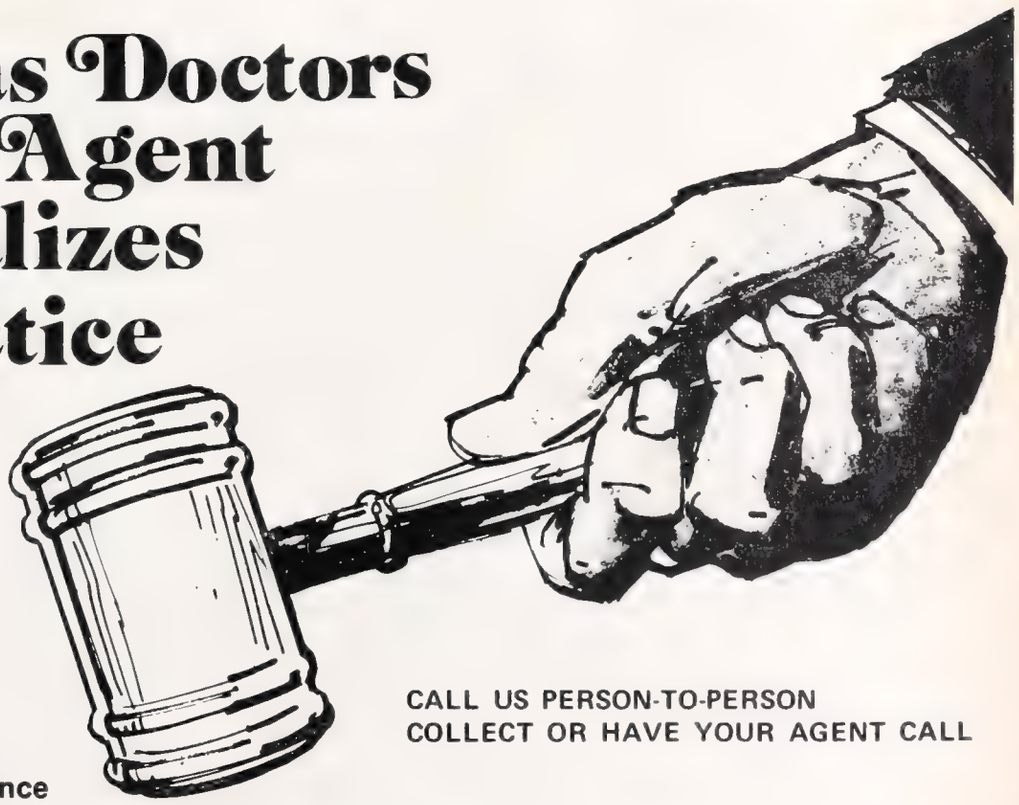

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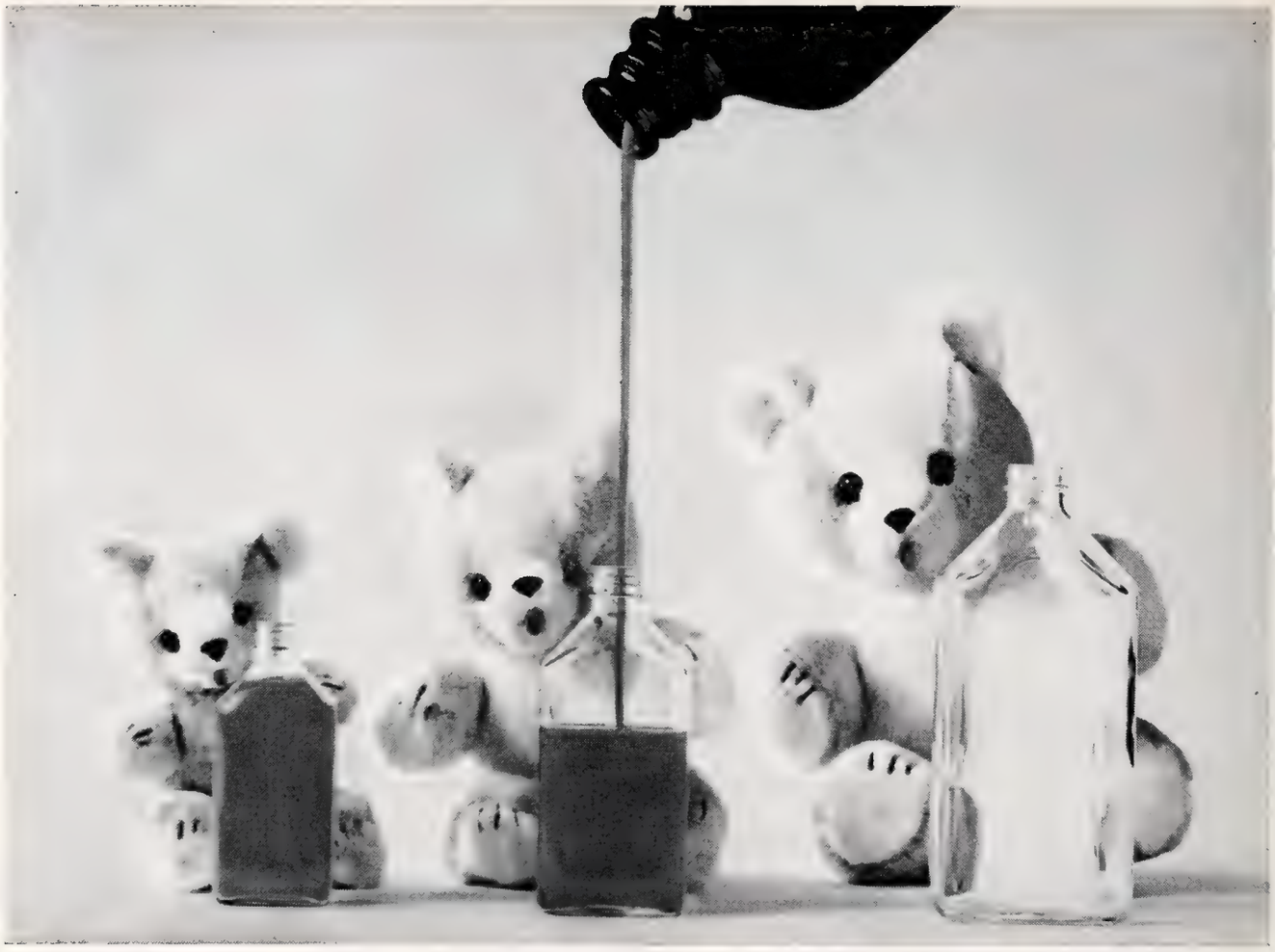

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Pituitary tumors: Recent advances in diagnosis and management

Naguib A. Samaan, MD, PhD; Milam E. Leavens, MD; and Richard H. Jesse, Jr., MD

The pituitary gland response is regulated by the hypothalamus. The hypothalamus serves as a relay and integrating center for many types of stimuli reaching the brain to the anterior pituitary gland. The hypothalamic neurosecretory cells produce substances that cause release or inhibition of the pituitary hormones, and these hormones reach the anterior pituitary gland via the portal venous system.

Our results in treatment of pituitary tumors indicate that the sublabial transsphenoidal microdissection technique is the ideal approach for removal of pituitary tumors confined to the pituitary fossa and on certain occasions with suprasellar extension.

The anterior pituitary gland long has been considered to be the "master" gland of the body, however, this concept is now outmoded. In the light of extensive experimental evidence, it was found that the anterior pituitary gland has its own "master." The hypothalamus may be considered, in part, to be the "final common pathway" between the central nervous system and the pituitary gland, which results in an appropriate metabolic response.

It now appears that the hypothalamus does in fact secrete releasing as well as inhibitory factors for all the known pituitary tropic hormones.[1,2]

The releasing factors or hormones are: (1) the growth hormone-releasing factor, (GRF), (2) the thyrotropin-releasing factor, (TRF or TRH), (3) the follicular-stimulating hormones and luteinizing releasing factor, (LH, RH), and (4) the corticotropin-releasing factor (CRF).

The inhibitory releasing factors are: (1) prolactin inhibitory factor, (2) melanotropic inhibitory factor, and (3) growth hormone inhibitory factor.

These releasing and inhibitory factors secreted by the hypothalamus are carried to the anterior pituitary gland via the portal venous system. The portal veins connecting the hypothalamus with the pituitary reach the medium eminence area of the hypothalamus, and these break up into a capillary plexus in the substance of the pituitary gland which in turn is drained by the dural sinuses, and hence, into the general venous circulation.

The effect of hypothalamic lesions in man can be demonstrated in the following case:

Persistent amenorrhea, lactation, and diabetes insipidus developed in a 36-year-old female following the birth of her fifth child. She had unmeasurable serum growth hormone, luteinizing hormone, and estrogens and normal thyroid and adrenal function, but her prolactin value was moderately elevated. A lesion was suspected to be in the hypothalamic pituitary area; however, the roentgenogram of the skull, arteriogram, and air encephalogram were reported to be normal.

After a long course of illness, the patient became acutely ill. A maculopapular skin lesion appeared and covered the entire body; it was diagnosed histologically as histiocytosis-X. Her general condition deteriorated rapidly and she died.

Postmortem examination showed an infiltration of the hypothalamus (Figs 1 and 2) and the posterior pituitary gland with histiocytosis-X. The anterior pituitary gland was intact with excess prolactin cells (Fig

Section of Endocrinology, Department of Medicine and Surgery, The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston, Houston, Texas 77025.

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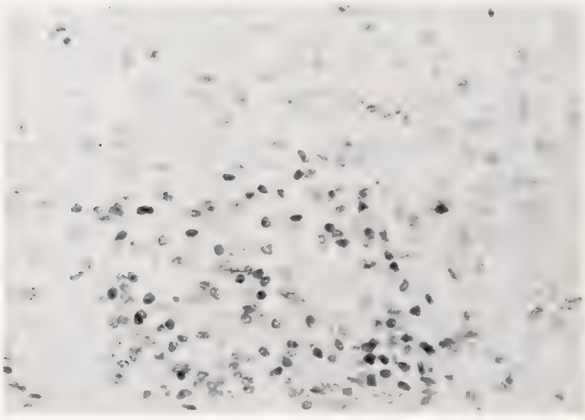
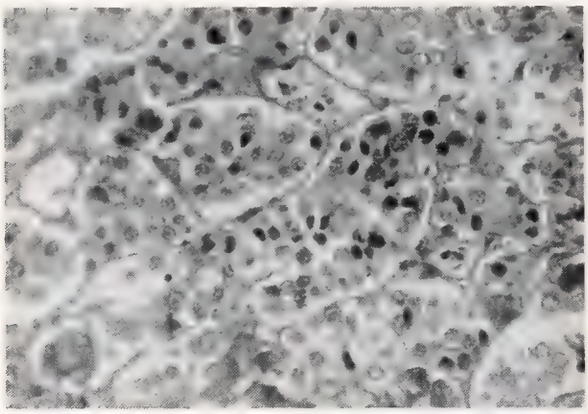
1. Microscopic view of the sagittal section of the hypothalamus showing infiltration anterior to the mammillary bodies (no magnification).



2. Microscopic view of hypothalamic infiltrate showing the infiltration with histiocytes and lymphocytes. Hematoxylin and eosin, X 30.



3. Light micrograph showing intact anterior pituitary with prolactin cells. Herlant stain. X 60.

3). The excess of prolactin cells was presumably caused by the hypothalamic lesion involving the prolactin inhibitory center, thus the prolactin producing cells were no more under the restraining effect of the hypothalamus. The lack of rise of the serum growth hormone during insulin hypoglycemia and the absence of a measurable level of luteinizing hormone was presumably due to the hypothalamic lesion involving the releasing centers of these hormones.[3]

Pituitary Tumors

Seven anterior pituitary hormones have been isolated and identified and methods for their precise measurement in blood have been developed. These hormones are: (1) growth hormone (HGH or STH), (2) adrenocorticotropic hormone (ACTH), (3) thyroid stimulating hormone (TSH), (4) luteinizing hormone (LH) (5) follicular stimulating hormone (FSH), (6) melanin stimulating hormone (MSH), and (7) prolactin (HPr). With hormonal measurement, it is possible to diagnose pituitary disorders caused by excess or deficiency of one or more of these pituitary hormones before development of gross, clinical, or anatomic changes.

Pituitary tumors are: (1) nonfunctioning pituitary tumors (chromophobe adenoma and craniopharyngioma), (2) growth hormone producing tumors, (3) corticotropic hormone producing tumors, (4) prolactin producing tumors, and (5) thyrotropic hormone producing tumors.

As yet, no instances of a pituitary neoplasm associated with hypersecretion of follicular stimulating hormone or luteinizing hormone (LH) have been reported.

Nonfunctioning Pituitary Tumors

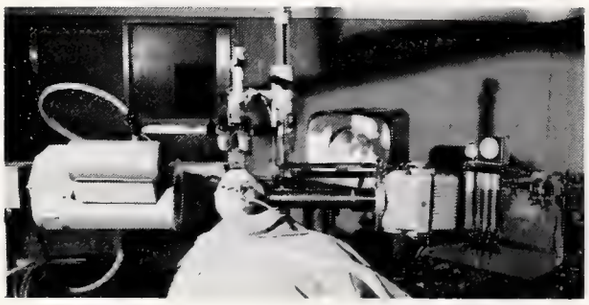
The presentation of the case varies according to the development of the disease and hormone deficiency produced by the tumor as the result of pressure by the pituitary tumor. Failure of normal growth pattern may be a presenting symptom in a child. Delayed sexual development, testicular atrophy or failure of menstruation, headaches, and visual deterioration may indicate the presence of a pituitary tumor such as craniopharyngioma or chromophobe adenoma. In these conditions, the growth hormone level in the blood is low and fails to rise after insulin hypoglycemia, or intravenous infusion of amino acid arginine. Similarly, there may be a deficiency of other hormones such as luteinizing hormone, follicular stimulating hormone, thyrotropin, and corticotropin. With the measurement of these hormones in the blood or their effect on target organs such as ovaries, testicles, thyroid, and adrenals and measurement of serum and urinary steroids, it is possible to diagnose this disorder early and institute therapy.

Hypopituitarism has to be differentiated from hypoadrenalism. In hypopituitarism, the ACTH level in blood is low while in hypoadrenalism, the ACTH level is high because the feedback mechanism is absent. If an ACTH assay is not available, measurement of 17-hydroxycorticosteroids after the administration of metyrapone (750 mg every 6 hours for 48 hours) is an important pituitary function test. Metyrapone inhibits the adrenal 11-β hydroxylase, resulting in a decrease of the cortisol synthesis, but the adrenal gland continues to excrete 11-deoxycorticosteroids which can be measured in urine. Before metyrapone is given, we should be sure that the adrenal cortex is intact by measuring the urine steroids or plasma cortisol before and after ACTH stimulation for three to four days (40 units of ACTH intravenously per day in normal saline over a period of 8 hours).

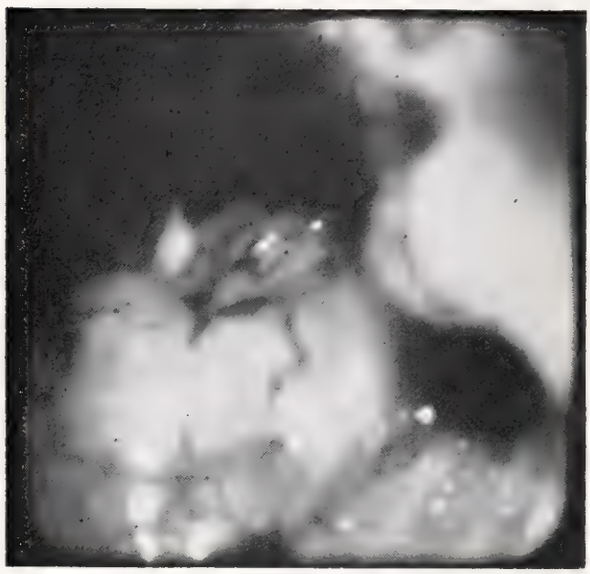
The most direct method of distinguishing hypothyroidism secondary to pituitary failure from that resulting from primary thyroid disease is by measuring blood for thyrotropin (TSH). In primary thyroid disease, the TSH is elevated because of the lack of the feedback mechanism. If the TSH assay is not available, the measurement of the thyroid uptake before and after administration of 10 units of bovine TSH daily for three days is of diagnostic value. In primary hypothyroidism, TSH administration produces no significant change in the thyroid uptake as compared with increased uptake if the thyroid failure is secondary to hypopituitarism. Occasionally the hypothyroidism is due to hypothalamic disease and this condition is called tertiary hypothyroidism. Intravenous injection of the hypothalamic thyrotropin-releasing hormone (TRH) will produce a rise of the circulating TSH if the anterior pituitary gland is intact, but no response if there is pituitary failure. This test is only available in a limited number of medical centers for clinical research, but most likely it will be widely used in the near future.

Treatment

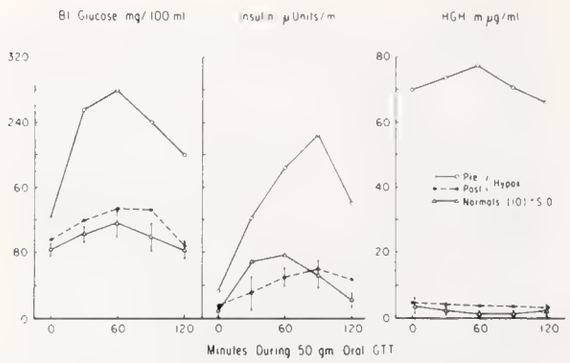
Preliminary arteriogram and air encephalogram studies are essential in the proper management of a craniopharyngioma or chromophobe adenoma because the extent of ventricular encroachment and dilation must be determined before operation can be planned. Craniopharyngioma often is not sensitive to irradiation, and surgery followed by irradiation is the method of choice.



4. An operating setting showing an image intensifier, a television screen, and the dissecting microscope.



5. A pituitary tumor with suprasellar extension as seen through the dissecting microscope (transfrontal root).



6. Serum glucose, insulin, and growth hormone levels in an acromegalic before and after transnasal transsphenoidal hypophysectomy compared to that found in normal subjects.

Treatment for chromophobe adenoma usually is by the transfrontal route if there is suprasellar extension, or by transsphenoidal approach if the tumor is confined to the pituitary fossa and shows signs of progressive increase in size and impairment of the pituitary function. The transsphenoidal approach also can be used in some patients with chromophobe adenoma with suprasellar extension. With the recent development of the microneurosurgery and use of the surgical microscope during the past ten years, significant progress has been achieved in the treatment of pituitary tumors either by the transfrontal or transsphenoidal approach. The magnification and illumination produced by the dissecting microscope affords more accurate and delicate dissection of the tumor off the optic chiasma and nerves, and allows preservation of the small arteries passing over the tumor capsule to enter the chiasma and hypothalamus (Figs 4 and 5).

Irradiation of the pituitary may produce temporary decompression of the optic chiasma, but there is as yet insufficient evidence of radiosensitivity to warrant irradiation only.

The dwarfism produced by growth hormone deficiency in children can be managed by injection of human growth hormone extracted from the pituitary gland of a cadaver. Recently, human gonadotrophic hormone became available and can be used in cases of hypogonadism secondary to hypopituitarism. Cortisone and thyroid replacement should be given and cortisone increased during the period of stress.

Growth Hormone Producing Tumors

Gigantism: If excess growth hormone is secreted because of hyperplasia or adenoma of the growth hormone secreting cells be-

fore puberty, proportionate growth (gigantism) rather than disproportionate growth (acromegaly) will develop. Rarely, more than one family member may suffer from the disease, but generally there is no recognizable hereditary influence.

Acromegaly: The patient with excess production of growth hormone may complain of headache, joint and bone pain, general weakness, hyperhidrosis, dyspnea, and signs and symptoms of heart failure; polyurea and polydipsia caused by diabetes mellitus, amenorrhea in the female, and impotence in the male also may be seen.

The grotesque features of acromegaly may not be noticed by the patient or the near relatives, but may be observed by other relatives or friends who have not seen the patient for some time. A comparison of photographs is often of value. General weakness is also a feature of long-standing effect of acromegaly. The tongue may become so enlarged that it interferes with speech.

The first change noted in the roentgenographic appearance of the pituitary fossa may be the double contour of the floor of the fossa before significant enlargement or bony destruction is evident. The finger tips may show tufting, but this also may occur in conditions other than acromegaly such as rheumatoid arthritis or as an occupational occurrence in typists.

The most important diagnostic finding for acromegaly is an elevated serum human growth hormone (HGH) level at fasting which is not suppressed after the administration of glucose (Fig 6).

Acromegaly is a potentially dangerous disease and should be treated early. The most significant complications of acromegaly are: (1) visual impairment due to suprasellar extension of the pituitary tumor; (2) cardiovascular complications such as coronary disease, cerebrovascular disease, and hypertension; and (3) general muscular weakness which is called "burned out" acromegaly. In our experience, patients who have so-called burned out acromegaly have severe acromegaly with high growth hormone levels and they benefit a great deal from therapy. Other major complications are: (4) arthritis (30% of the patients may present with arthritis pain in the hands, feet, and vertebral region); (5) neuritis (most important is the carpal tunnel syndrome as well as peripheral neuropathy); (6) diabetes mellitus (approximately 30% of the patients with acromegaly have overt diabetes; 30% may have prediabetes); and (7) the female patients may have amenorrhea and the male patients may be impotent.

Treatment: When plasma HGH measurements became available, it was apparent that conventional radiation therapy of the pituitary failed to restore HGH levels to normal in many patients. Roth et al[4] have studied the use of conventional radiation therapy and found that 4,000 R of cobalt therapy directed to the pituitary produces significant lowering of serum HGH levels, but that even after several years the majority of the patients continue to have hypersecretion of HGH; our results were similar.[5] High energy radiation has been used by Lawrence[6] to treat patients with acromegaly. The results are better but several years are required to restore HGH secretion to normal and in many patients this is not accomplished.

Yttrium 90 implants in the pituitary tumors under fluoroscopy have been used by Fraser and Joplin in London[7] and by Kaufman et al.[8] Clinically and by growth hormone measurement, the results with this

technique were better than with external cobalt irradiation; however, we found that this method, in spite of its simplicity, has a 7 to 10% incidence of rhinorrhea and meningitis.

Cryohypophysectomy, using liquid nitrogen to freeze and produce infarction in the pituitary tumor has been used by a few medical centers, but the incidence of complications from rhinorrhea and meningitis and diabetes insipidus was high and the results were discouraging.

In our experience, Hardy's microdissection transsphenoidal technique provides the best approach. It has been adapted to permit selective removal of the pituitary adenoma with preservation of the normal pituitary tissue in some patients with well-defined tumors or removal of the anterior pituitary gland only.

The advantage of this technique is that manipulation of the optic nerves and chiasma is avoided and development of intracranial hematomas, cerebral edema and brain damage with epilepsy is avoided. Postoperative discomfort is usually minimal. Incidence of rhinorrhea is eliminated to a great extent since the diaphragm sella is not disturbed and the pituitary fossa is packed with muscle tissue and the floor is reconstituted with cartilage splint from the septum.

In the presence of suprasellar extension, the most preferable approach is the transfrontal route; however, some surgeons including ourselves extended the transsphenoidal approach for tumors with suprasellar extension. Hardy[9] operated immediately after pneumoencephalography and, using televised radiofluoroscopy, watched the third ventricle return to its normal position and the suprachiasmatic cistern fill with air as the tumor was removed.

Hypersecretion of ACTH

Cushing's disease is a pituitary disorder characterized by hypersecretion of ACTH which in turn produces hypersecretion of cortisol. The hypersecretion of cortisol produces Cushing's syndrome. An occult pituitary tumor may be present at the time of diagnosis but most often the sella turcica is not enlarged and the pituitary gland may not show a recognizable histological abnormality. Small basophilic tumors of the anterior pituitary are seen in about 25% of the patients with Cushing's disease examined at autopsy.

Diagnosis of Cushing's disease is confirmed by the finding of high serum ACTH, elevated urinary excretion of 17-hydroxycorticosteroids, elevated plasma cortisol levels, and lack of diurnal variation in plasma cortisol levels. This is in contrast to the low levels of ACTH seen in patients with Cushing's syndrome due to adrenal neoplasm. Dexamethasone suppression tests in a dose of 8 mg per day for two days are also useful in distinguishing Cushing's disease from Cushing's syndrome due to adrenal neoplasm or ectopic ACTH. In Cushing's disease due to pituitary excess of ACTH, dexamethasone will produce 50% or more suppression of the 17-hydroxycorticosteroids, but usually has no effect in other causes of Cushing's syndrome.

Treatment of Cushing's disease in patients with occult tumors with normal-sized sella turcica: Conventional radiation therapy to the pituitary (cobalt 5,000 R) or heavy particle radiation (7,000 R) will induce lasting remissions after three to six months in about 30% of the cases. Bilateral total adrenalectomy may be the treatment of choice when preservation of gonadal function is desirable, when radiation

fails, or when a more rapid reversal of adrenal hyperfunction is needed. In older patients, where maintenance of fertility is not a factor, surgical hypophysectomy may offer optimum results.

However, bilateral adrenalectomy may not result in the cure of Cushing's syndrome since some aberrant adrenal tissue present in abnormal location may undergo hypertrophy under the effect of high pituitary ACTH, or the ACTH pituitary tumor may undergo rapid enlargement after removal of the adrenals and disappearance of the feedback mechanism.

Although pituitary tumors may be present when Cushing's disease is recognized, they are more commonly observed after treatment by total adrenalectomy. In 15 to 20% of the patients who undergo adrenalectomy for Cushing's disease, pituitary tumors develop after surgery. The development of the pituitary tumor is usually heralded by intense pigmentation of the skin (similar to that seen in Addison's disease). This condition is referred to as Nelson's syndrome. The pituitary tumors are chromophobe adenomas, but in several instances these tumors have shown unusual invasive properties with the development of cranial nerve palsies. The preferred treatment appears to be surgical hypophysectomy.

Case 1: A 10-year-old girl was found to have Cushing's disease. She was treated by a right total and left subtotal adrenalectomy and radiation therapy (4,000 R) to the pituitary gland. This was followed by remission of the Cushing's syndrome which lasted for 1.5 years followed by recurrence. The remaining adrenal tissue on the left was removed surgically but no improvement occurred. Laboratory studies at that time revealed an elevation in plasma and urinary 17-hydroxycorticosteroids as well as in plasma ACTH. A radioactive yttrium rod was inserted into the pituitary gland by a transnasal, transsphenoidal approach. A prompt remission of the Cushing's disease followed and has been maintained for the past nine years.

Case 2: A 43-year-old white female had Cushing's disease diagnosed eight years ago. At that time one adrenal gland was removed, but the results of clinical and biochemical studies were unchanged. The remaining adrenal gland was then removed three years ago. Following the adrenalectomy, the patient developed severe pigmentation of the skin and mucous membranes, and the pituitary fossa showed enlargement which was not seen previously. Transsphenoidal hypophysectomy was then done to remove an ACTH-producing tumor. Following hypophysectomy, her skin pigmentation gradually disappeared.

Hypersecretion of Prolactin

Nonpuerperal galactorrhea and amenorrhea have been observed in women in association with chromophobe adenoma of the pituitary gland. This condition is referred to as the Forbes-Albright syndrome.[10] This condition has to be differentiated from other causes of lactation and amenorrhea, for example: (1) the Chiari-Frommel syndrome, which is persistent lactation and amenorrhea following labor without obvious pituitary tumor, and (2) del Castillo syndrome, where lactation and amenorrhea are not related to pregnancy. However, in the latter two syndromes, we must bear in mind that some of these patients probably will demonstrate a tumor after prolonged observation. There are other causes of nonpuerperal galactorrhea such as that seen in acromegaly, hypothyroidism, excessive sucking and manipulation of the breast,

after intake of oral contraceptives, and after medication with reserpine.

Recently, a sensitive and specific radioimmunoassay for human prolactin which is capable of measuring normal serum prolactin levels has been developed. Studies with Forbes Albright syndrome associated with pituitary tumors have demonstrated elevated serum prolactin levels which were restored to normal or below after surgical removal of the tumor, thus establishing that these are prolactin secreting tumors.[2]

Case 3: A 27-year-old woman had noted persistent amenorrhea and galactorrhea following the birth of her child seven years ago. We found that the patient's urinary estrogens and serum LH were low, while the human serum prolactin was elevated both at fasting and during TRH stimulation. Roentgenograms of the skull showed an enlargement of the pituitary fossa on one side. A transnasal transsphenoidal microsurgical exploration of the sella turcica was performed. A prolactin-producing tumor was found and removed with preservation of the normal pituitary tissue. One month postoperatively, the patient's menstruation was resumed; after three months, she conceived and had a normal pregnancy and delivered a healthy baby 12 months following surgery.

Hypersecretion of Thyrotropin (TSH)

Hyperthyroidism in association with pituitary tumor is uncommon. Three cases have been reported in which there was good evidence that the pituitary tumor was secreting excessive amounts of TSH producing hyperthyroidism. Remission of hyperthyroidism after irradiation of the pituitary tumor has been reported in these patients.[11]

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Hyperviscosity in IgG myeloma: Detection and treatment in community medical facilities

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Hyperviscosity of serum imparts to blood abnormally high resistance to flow. The symptoms of hyperviscosity are treatable complications of multiple myeloma wherein peculiar paraprotein molecules may occur in sufficient quantity to impede the normal hemodynamics and blood function.

The frequent occurrence of hyperviscosity in macroglobulinemia (IgM paraproteinemia) seems at once more self-explanatory than a hyperviscous state developing with lower molecular weight paraproteins such as IgG or IgA.[1] There is a special scientific fascination for the serum hyperviscosity intervening in IgG and IgA paraproteinemia, as the mechanism has remained somewhat obscure. However, as IgG is the commonest myeloma paraprotein and recent estimates place the incidence of hyperviscosity in IgG myeloma at 4.2%, there is sufficient reason for clinical interest in the syndrome induced by serum hyperviscosity.[2]

The symptoms of hyperviscosity are readily recognizable by such features as heart failure, often without effusion or edema; vascular insufficiency; hemorrhagic phenomena; dulled sensorium; and fatigue. Once suspected, hyperviscosity can be confirmed using very ordinary laboratory equipment and treatment by plasmapheresis can be performed with simple phlebotomy. Rapid recognition and treatment mitigate against the attendant high morbidity in hyperviscosity.[1,3] Both diagnosis and therapy are within reach in most modest medical surroundings and should not be withheld.

This report recounts the occurrence of hyperviscosity in a patient with IgG myeloma. The congestive heart failure, purpura, and clouded sensorium remitted following plasmapheresis. The patient died of complications attributed to prednisone therapy in the elderly, that is, rupture of colonic diverticulum.

Case History

A 77-year-old white woman, a practical nurse, presented in September 1972 with complaints of fatigue and lightning abdominal pains of six weeks duration. She recalled that the first symptom was back pain in the spring of 1972. At that time, the patient took a series of chiropractic back adjustments during which the pain intermittently worsened. Subsequently, the patient noted increased memory problems, fatigue, and the appearance of dysuria and dyspnea. She sought further medical help and the attending physician noted diffuse osteoporosis and three midthoracic compression fractures of the vertebral bodies. The patient was referred for hematologic evaluation.

Examination revealed a slightly built, elderly female. Purpura were present over the extensor surfaces, and petechiae covered the dorsum of the feet. Funduscopic examination revealed no retinal venous distention or congestion. Light rales were present throughout the chest and a grade II/VI systolic ejection murmur was present. The liver span was 17 cm and a spleen tip was palpable. No remarkable lymphadenopathy was present. The patient seemed confused and was slow to respond to questions requiring memory.

Laboratory studies revealed a Bence-Jones proteinuria and clumps of leukocytes in the urine. The direct Coombs' test was positive as were the cold agglutinins. Total serum proteins were 12 gm/100 ml, of which 2.4 gm/100 ml were albumin. The Sia test was positive. Calcium level was normal, but the alkaline phosphatase value was 275 IU, possibly indicating the recent occurrence of pathologic bone fracture. Hematocrit was 29%, hemoglobin was 9.3 gm/100 ml, WBC 11,700/cu mm, platelets 202,000/cu mm, and erythrocyte sedimentation rate 74 mm/hour corrected, Westergren. Sternal bone marrow aspirate

showed 12.5% plasmacytoid lymphocytes and 11% plasma cells on differential count. Peripheral blood smear revealed 21% plasmacytoid cells. Electrophoresis showed a large M spike in the gamma region. Immunoelectrophoresis of serum and urine showed this to be an IgG paraprotein. Light-chain immunotyping of serum and urine revealed the Bence-Jones proteins to be of the kappa light-chain variety. The serum paraprotein reacted best in immunoelectrophoresis with IgG1 heavy-chain typing antiserum.

Course

The patient was hospitalized immediately, and serum viscosity by white cell pipette technique at 37 C was shown to be elevated (Fig 1). *In vivo* crossmatch of packed cells using chromium 51-labelled donor cells was necessary as, *in vitro,* the patient's blood congealed rapidly at 22 C. The packed cells from the *in vivo* crossmatch were administered warm at the time of initial plasmapheresis. Four units plasmapheresis in four days relieved the patient of congestive failure, larger purpura, and dullness. The patient was treated with Alkeran and prednisone,[4] but within one month the hyperviscosity symptoms returned and two additional units plasmapheresis yielded relief. Penicillamine, 750 mg per day, was begun. After five weeks, another course of Alkeran and prednisone was administered. Severe abdominal pain accompanied by frank bloody diarrhea occurred. Barium enema examination revealed a walled-off rupture of a descending colonic diverticulum. With surgical consultation, it was elected to treat with a broad-spectrum antibiotic, and the patient returned home. A second diverticulum rupture occurred three weeks later, requiring emergency transverse colostomy. Symptoms and laboratory findings of hyperviscosity had reappeared despite penicillamine therapy. The patient died two days postoperatively in severe acidemia with localized peritonitis.

Discussion

Age and sex do not correlate with the development and symptomatic hyperviscosity in IgG multiple myeloma.[2] The specific type of light-chain distribution in hyperviscous IgG myeloma cases does not differ significantly from that distribution of light chains in IgG myeloma without hyperviscosity.[2] Like other hyperviscous IgG multiple myeloma sera, ours showed cryoprotein activity.[2] In fact, four cold absorptions failed to significantly weaken the cryoprotein responsible for crossmatch difficulty. A positive Sia test is a consistent enough finding in hyperviscous IgG myeloma to warrant viscosity studies even in the face of unrecognizable clinical symptoms.[2] The positive Sia test in these cases is apparently attributable to the peculiar paraprotein responsible for the hyperviscosity.

Only a small number of cases of hyperviscosity due to IgG paraproteinemia have been reported in the literature.[2] As with other reported cases, this hyperviscosity

1.

	VISCOSITY							
	SECONDS							
Date	Distilled H_2O	Control Serum	Patient Actual	Serum Relative	Serum Protein gm/100 ml	IgG gm/100 ml	Hyperviscosity Symptoms	Treatment
9/7/72	10	18	58	5.8	12.0	6.8	+	Plasmapheresis
9/11/72	8	11	25	3.1	9.2		−	Alkeran, prednisone
9/14/72	9	14	25	2.7	8.9	5.1	−	Radiation T-spine
9/18/72	10	18	24	2.4			−	
10/6/72	9	17	48	5.3*	11.8	6.1	+	Plasmapheresis, penicillamine
10/9/72	10	13	25	2.5			−	
10/13/72	9	13	26	2.9			−	Alkeran, prednisone Diverticular rupture, antibiotic
11/1/72	10	17	38	3.8	9.9	5.9	+	Plasmapheresis (penicillamine stopped)
11/10/72	10	16	28	2.8	8.9		−	Emergency colostomy for repeat diverticular rupture, death

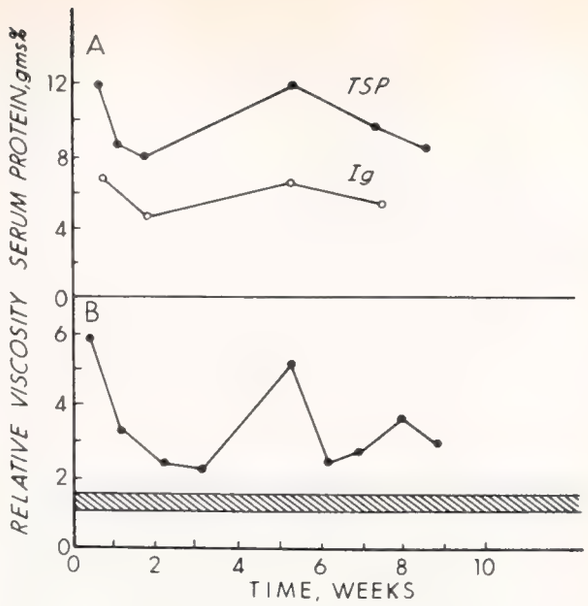
*Low shear serum viscosimetry performed by C.K.O. as reference check was 5.17.

failed to respond to moderate doses of penicillamine.[1] The hyperviscosity symptoms of this patient became manifest in a critical level of myeloma protein component of 6 gm/100 ml (Fig 2). This relatively low gamma globulin concentration associated with hyperviscosity suggested that the paraprotein likely was of the IgG3 variety. IgG3 globulin has been shown to aggregate and "crystallize" into large complexes at a lower concentration than IgG1, for example.[5] Subsequent subtyping of our patients serum IgG, however, showed the strongest reaction on immunoelectrophoresis with IgG1 antiserum.

Serum viscosity can be measured utilizing standard white cell pipettes in duplicate systems. One pipette placed in a 13 x 100 mm test tube containing the patient's serum is suspended in a rack in a 37 C water bath. The other, suspended in a duplicate tube containing distilled water, is likewise in the water bath. A third tube and pipette can be used to supply a normal control. The test fluid is drawn into the diluting pipette to the first mark above the diluting chamber bulb, and on release with the pipette tip above the fluid meniscus, the fall of the fluid is timed to reach the first mark below the bulb. This time is 9 seconds ± 1 for distilled water, and serum should be 1.6-2.2 times the time required for the distilled water flow (relative viscosity).[6] Such a simple system lends itself to repeatable results which correlate well with the actual serum viscosity as measured by more costly methods, utilizing low shear viscosimeters.

Plasmapheresis has been shown to ameliorate symptoms of hyperviscosity far more satisfactorily than therapy aimed at its clinical manifestations.[1] Plasmapheresis remains the mainstay of acute therapy although antimetabolic chemotherapy directed against the malignant plasma cells is necessary over the longer term.[1,2] Therapeutic plasmapheresis requires only phlebotomy tubing and collecting bag or bottle with suitable anticoagulant (ACD). If adequate centrifuge facility is not available, the blood cells can simply be allowed to settle, then the plasma is decanted off prior to reinfusion of the cells.

Symptoms compatible with hyperviscosity in multiple myeloma patients should be investigated. Any modest medical facility is capable of supplying diagnostic and therapeutic equipment necessary for treating most myeloma patients with hyperviscosity within that medical community. The results which come from recognizing and treating this complication of the plasma cell dyscrasias can be extremely gratifying for both physician and patient.



2. (A) serum protein (TSP), immunoglobulin (Ig) and (B) serum viscosity changes are presented over a nine-week period of observation. Hatched area (B) is the normal range of serum relative viscosities.

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Case of carcinoma secondary to rectal tuberculosis

James E. Mathews, MD; Ransom R. Bucholz, MD

Thirteen years after he had fully recovered from active pulmonary and rectal tuberculosis, a 56-year-old man developed symptoms and physical evidence of rectal carcinoma in the site of his previous rectal tuberculoma. Active antitubercular therapy and radiation of the tumor preceded a one-stage abdominoperineal resection. The patient recovered, has no evidence of recurrence, and leads an active life. The unusual sequence of carcinoma secondary to rectal tuberculosis is noted, and it is stressed that any patient with active or inactive tuberculosis who develops gastrointestinal complaints should have thorough clinical investigation.

Carcinoma of the rectum occurs frequently, but primary or secondary rectal tuberculosis is rare.[1] A few cases of tuberculosis coexisting with cancer of the rectum have been reported along with speculation as to which lesion appeared first.[2,3] The reported cases differ in that the carcinomas were not stated to be in the scar of the old tuberculosis lesion, or else the carcinoma and tuberculosis were present at the same time.

A patient with well-documented pulmonary and rectal tuberculosis subsequently developed carcinoma in the healed scar. To our knowledge, this is the first such case to be documented.

Case Report

A 56-year-old man was admitted to the Veterans Administration Center in Temple, Texas, on July 26, 1971. He had a two-month history of tenesmus with eight to ten bloody stools each day. Because of decreasing stool caliber and inability to achieve good rectal evacuation, he had been taking yellow phenolphthalein. Low abdominal cramping and perineal discomfort were moderately severe. He had lost 6.8 kg (15 lb) during the two-month period.

His previous medical history is relevant in that 13 years earlier, at age 42, the patient was admitted to the Veterans Administration Hospital in Houston. At that time, he had a two-month history of diarrhea but no melena, abdominal pain, or other gastrointestinal complaints. He had lost 18.2 kg (40 lb) in several months. There was roentgenographic and bacteriologic evidence of active, moderately advanced, pulmonary tuberculosis involving apices of both upper lobes of the lung. A firm, posterior, anorectal, ulcerative mass 7 cm in diameter was noted on rectal examination. Examination of multiple biopsies on different occasions did not reveal a malignant lesion, but an active tuberculous ulcer extended from the dentate line proximally for 7 cm. Acid-fast bacilli were morphologically typical of *Mycobacterium tuberculosis,* and a typical tuberculous lesion was seen microscopically.

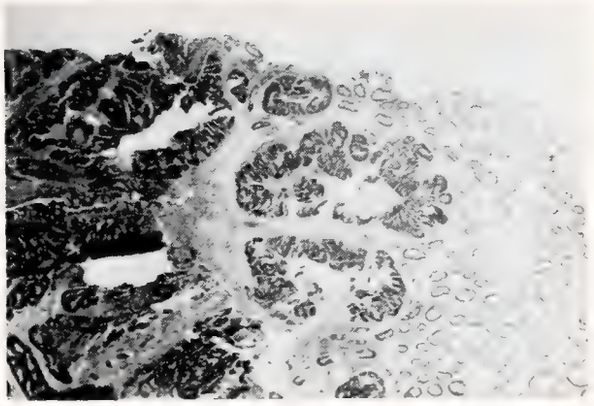
Active therapy including penicillin and antitubercular drugs (consisting of streptomycin, isoniazid, and para-aminosalicylic acid) was given from May 4, 1958, until June 14, 1959. During that period, the anorectal lesion decreased to approximately one-half its original size. The patient was discharged from the hospital on June 16, 1959, with inactive tuberculosis. The rectal lesion had allegedly healed. Isoniazid and para-aminosalicylic acid were continued until Nov 19,1962, then isoniazid, three times daily, was continued until June 1964. The patient did well and maintained a weight of 87.2 kg (192 lb) until his rectal symptoms developed in May 1971.

Examination during his July 26, 1971,

From the Surgical Service, Veterans Administration Center, Temple.

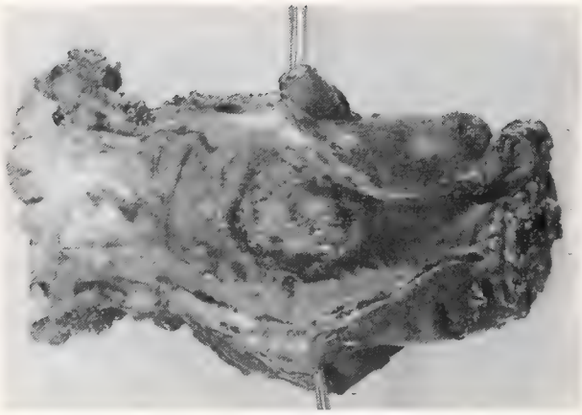
admission revealed: temperature 100.6 F; pulse rate 80/minute; respirations 22/minute; blood pressure 134/94 mm Hg; weight 80.3 kg (177 lb); height 185.5 cm (6 ft. 1 inch). He appeared chronically ill and was pale. The only pertinent physical abnormalities were anal sphincter spasm and a hard-fixed posterior mass that extended from the dentate line to above the middle rectal valve. Proctosigmoidoscopy disclosed an ulcerated lesion with submucosal edema, rolled nodular margins, and a shaggy exudative base that measured 5 x 5 cm. Several biopsy specimens were taken for histologic, parasitic, and microbial studies. These studies revealed well-differentiated adenocarcinoma with deep invasion (Fig 1). A radiologic examination employing barium enema demonstrated constriction and deformity of the rectosigmoid, and mucosa that was nodular and ragged (Fig 2). The remainder of the colon was normal. Numerous sputum examinations were negative for acid-fast bacilli.

Clinical laboratory values were: leukocytes 7,600/cu mm with a normal differential count; hemoglobin 10.6 gm/100 ml; hematocrit, 32%; total serum iron, 14 μg/100 ml; and total iron binding capacity 242 μg/100 ml. Results of urinalysis were normal, and a serologic test for syphilis was nonreactive. With the exception of albumin (3.2 gm/100 ml) and serum glutamic oxaloacetic transaminase (87 King units), the results of sequential multiple analyses of serum (SMA-12) were normal (total protein, electrolytes, blood urea nitrogen, bilirubin, glucose, and alkaline phosphatase). The corrected sedimentation rate was 22 mm/hour. Ova, cysts, parasites, or enteric pathogenic bacteria were not found in the stools, despite the presence of occult blood (4+). Electrocardiographic studies were interpreted as within

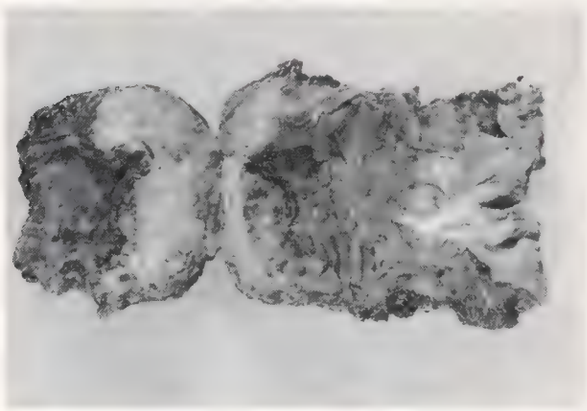


1. Hematoxylin and eosin stain showing adenocarcinoma at site of previous tuberculoma. X 140.

2. Preoperative roentgenogram (barium enema study) of the colon.



3. Gross specimen of rectum showing neoplasm (45 X 40 mm).



4. Perpendicular incision in gross specimen. Note wide area of necrosis.

normal limits. Roentgenograms of the chest indicated bilateral, inactive apical pulmonary tuberculosis.

Because of the past history of pulmonary and rectal tuberculosis, isoniazid was prescribed, 100 mg three times daily for two weeks preoperatively. Because the rectal mass was so large and firmly fixed, radiation (a total tumor dose of 3,000 rads during a 12-day period) was administered by the linear accelerator. The tumor mass decreased in size, and discomfort was minimal after the radiation therapy was completed. Mechanical and antimicrobial bowel preparation was followed by abdominoperineal resection (one stage) and primary perineal wound closure on Aug 30, 1971. The surgical specimen revealed an oval ulcer bed, 45 x 40 mm, covered with necrotic, grayish material (Fig 3). The ulcer margin was nodular, indurated, and raised. The bowel wall in the ulcer region was 6 cm thick with microscopic evidence of inflammation, fibrosis, and focal necrosis. Beneath the ulcer base was massive necrosis of the adenocarcinoma (Fig 4). There was no evidence of tuberculosis in the resected specimen. The postoperative course was without complications. Colostomy care training was accomplished, and when the patient was discharged from the hospital on Sept 12, 1971, he was able to care for himself and his colostomy. Subsequent outpatient examinations have not revealed difficulties. His laboratory values are within the normal range; he works daily, denies any sexual impotence, and has no evidence of recurrence or metastasis.

Comment

Formerly, gastrointestinal tuberculosis was suspected and searched for in any patient with far advanced pulmonary tuberculosis.

In the late 19th and 20th centuries, from 46 to 85% of patients were reported to have gastrointestinal involvement when the pulmonary tuberculosis was extensive.[4] It was established that the more severe the pulmonary tuberculosis, the more likely that rectal and other gastointestinal tubercular lesions would be associated.[5] Departments of proctology were established in some tuberculosis sanatoriums because of the high incidence of anorectal complications.[6] In retrospect, some of the lesions may have represented transmural colitis or other inflammatory diseases, but the incidence of gastrointestinal tuberculosis was still high. Rokitansky, in 1854, taught that the two diseases—carcinoma of the colon and tuberculosis of the colon—are antagonistic. Randall and Spalding[2] pointed out that this view had its proponents and antagonists as late as 1945.

Only a few cases of gastrointestinal tuberculosis and carcinoma have been reported in the literature. Even more uncommon is the finding of carcinoma in a healed gastrointestinal scar of tuberculosis. Carcinoma in an active intestinal tuberculous lesion would cause one to suspect that the tubercle bacilli was facilitated either by lymphatic spread or that it passed directly from the stool to the malignant lesion. However, the relationship between healed pulmonary tuberculosis and development of carcinoma of the lung in the tuberculous lesion is well known. Therefore the pathogenesis is only speculative.

The gastrointestinal tract of any patient with active or inactive tuberculosis who develops gastrointestinal complaints should be examined thoroughly. If a lesion is found, carcinoma must be excluded and treatment dictated by the findings. Tuberculous enteritis may be treated successfully with antituberculous drugs; but free perforation, abscess formation, hemorrhage, obstruction or fistula formation requires surgical intervention.[7] A review of the literature failed to reveal another instance of gastrointestinal tuberculosis in which the patient fully recovered, then many years later developed carcinoma in the site of the tuberculous scar.

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Endobronchial occlusive lymphoma

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An incomplete obstruction of the left main stem bronchus developed during the course of advanced reticulum cell sarcoma in a 50-year-old man. This was demonstrated by roentgenographic studies, and was successfully treated with local irradiation. Post-treatment studies confirmed the therapeutic effect. The relevant literature is reviewed.

Involvement of the trachea or bronchi is rare (1.3%) in reticulum cell sarcoma, although clinical involvement of mediastinal lymph nodes is fairly common (34%) and mounts to 56% at postmortem examination.[1] We have recently encountered a case of reticulum cell sarcoma in which the clinical impression of partial obstruction of the left mainstem bronchus was confirmed by roentgenographic studies and by subsequent response to local radiotherapy.

Case Report

A 50-year-old man underwent an exploratory laparotomy for a palpable mass in the right iliac fossa in July 1967. An incisional biopsy specimen from an inoperable tumor involving the great vessels revealed reticulum cell sarcoma. Roentgenogram of the upper gastrointestinal series, barium enema, and bone marrow aspiration were normal. Results of liver function tests were borderline, and an inferior vena cavagram showed anterior compression of the vena cava. Therapy with cyclophosphamide, vincristine, and prednisone was begun, and the tumor went into a complete remission within a few weeks. A follow-up inferior vena cavagram in January 1968 was normal. The first relapse occurred in February 1969, and remission was induced by the same regimen. After that, several more relapses, followed by successively shorter periods of remission induced by the same combination of drugs, occurred.

In February 1970 the patient complained of weakness, dry cough, and shortness of breath on exertion. Examination of the chest revealed little air exchange, and decreased fremitus over the left lung field. No dullness was found on percussion. A routine x-ray film of the chest (Fig 1) showed slightly diminished volume of the left lung. An expiratory film (Fig 2) showed a definite air trapping within the left lung, with displacement of the mediastinum and the heart to the right. A laminogram of the carinal area (Fig 3) provided an excellent demonstration of a slightly lobulated endobronchial mass lesion, measuring 3 cm in axial dimension, arising from the lateral wall of the proximal left main stem bronchus. A course of radiotherapy (1,500 R) through a 10 x 10 cm mediastinal portal was given. Prompt relief of respiratory symptoms ensued. An expiratory x-ray film of the chest showed definite improvement at the conclusion of radiotherapy with a disappearance of air trapping and mediastinal area showed striking changes. The endobronchial tumor mass was no longer identifiable as such; instead, there was irregular thickening of the bronchial mucosa and irregularity of the bronchial margins through the level previously occupied by the tumor.

The patient remained asymptomatic for four months, then he again complained of shortness of breath and cough. Endobronchial tumor could not be demonstrated. Instead, infiltrates in the right lung were noted. This process rapidly extended to the left lung, and was interpreted as bilateral interstitial pneumonitis. Multiple sputum cultures were negative. A bronchoscopic biopsy specimen was normal.

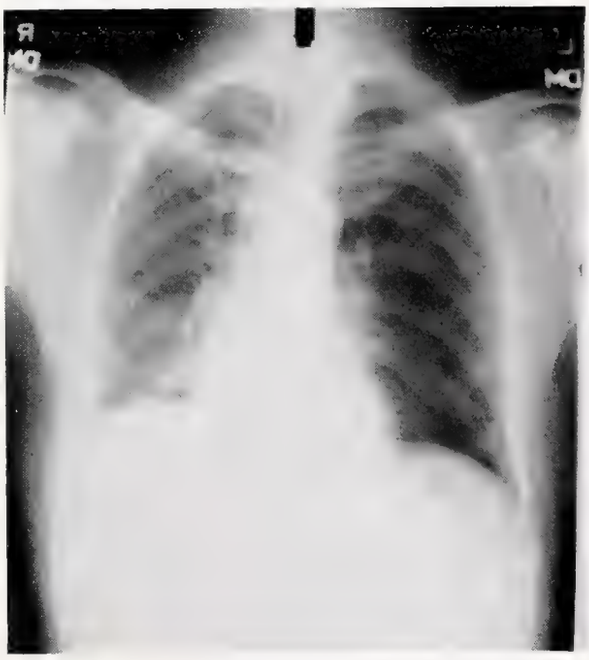
The patient refused to undergo lung biopsy. Blood serum contained antibodies to histoplasma in a titer of 1:8. The patient died in respiratory distress. Autopsy was not performed.

Discussion

Endobronchial occlusive lymphoma occasionally may be encountered in Hodgkin's disease,[2-7] less commonly so in lymphosarcoma,[5,8,9] and rarely in reticulum cell sarcoma.[8,10,11] It may represent a primary process to that organ, or only a complication in the course of disseminated lymphoma. The striking absence of endobronchial involvement is emphasized in a number of series of primary malignant lymphoma of the lung.[12-15] This observation probably stems from the fact that lymphoma usually arises from the peribronchial lymphoid elements surrounding the cartilage. The tumor frequently invades the bronchial wall down to the submucosa, but rarely breaks through into the bronchial lumen. The mucosa usually remains intact,[15] while the tumor grows and invades the lung parenchyma. This process may serve as a diagnostic indicator in cases of endobronchial occlusive lymphoma, which almost invariably present with grossly abnormal routine chest roentgenograms, namely a mass and/or atelectasis.

Our case is unique in that, even though the clinical symptoms and the physical signs were so characteristic, the routine chest roentgenogram could have been interpreted as being within normal limits. The expiratory film and the laminograms, however, unraveled the mystery. It seems surprising to find no evidence of atelectasis with this degree of bronchial obstruction. However, under certain circumstances—collateral ventilation and reduc-

1. Posteroanterior film of the chest shows slight diminution in the volume of the left lung.



2. Expiratory film of the chest demonstrates air trapping within the left lung, and a shift of the mediastinum to the right.

ed blood flow through the affected lung—collapse may be delayed even when the main bronchus is obstructed.[16]

The diagnosis in cases presenting with primary endobronchial lymphoma is established by a bronchoscopic biopsy.[11] The management of such patients can be by surgery[10] or radiotherapy[9] or both,[8] all with equally good results. Survival of one year or more is the rule. In patients known to have disseminated disease, bronchoscopy is warranted, but not indispensable. The treatment of choice in these patients is radiotherapy. Relief of symptoms is usually prompt, with disappearance of the tumor mass and sometimes complete healing with minor residual fibrosis, as occurred in our case. The prognosis is, however, poor, and survival beyond one year is rare.[5]

3. Laminogram of the carinal area demonstrates left endobronchial tumor mass.

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Dr. Mavligit, Department of Development Therapeutics, The University of Texas M. D. Anderson Hospital and Tumor Institute, 6723 Bertner Avenue, Houston, Texas 77025.

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Lacking in substantial evidence of effectiveness: For relief of nasal congestion and hypersecretion associated with the common cold and sinusitis.

Final classification of the less-than-effective indications requires further investigation.

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IMPORTANT INFORMATION: *This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

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Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

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Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid,* 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

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INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

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Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported

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Pediatric grand rounds: Current diagnosis and treatment of cardiac arrhythmias

A. A. Mintz, MD, Guest Editor; Robert L. Williams, MD; Martin Yudovich, MD

The availability of monitoring equipment for the critically ill pediatric patient has uncovered cardiac arrhythmias in many diseases. The appropriate diagnosis by electrocardiographic technique enables rational management of the problem. The arrhythmias of the pediatric age group are discussed and appropriate therapy is suggested.

Dr. Martin Yudovich, Chief Pediatric Resident: An eight-year-old black female was first seen in the pediatric clinic following an episode of fainting (possibly a Stokes-Adams attack). She was in good health until three days prior to admission when a mild upper respiratory infection with fever, cough, polymyalgias, and coryza developed. She received no treatment. On the morning of admission, she suddenly felt faint and lost consciousness (there was no history of foaming at the mouth or incontinence). She awoke subsequently and was asymptomatic.

Physical examination revealed a heart rate of 40 beats/minute, temperature 102 F, blood pressure 100/45 mm Hg, and respiratory rate, 16/minute. No other pertinent physical findings were noted. An electrocardiogram (ECG) showed complete heart block.

Laboratory values were as follows: Hemoglobin 11.6 gm/100 ml; hematocrit reading 34.6%; white blood cells 6,500/cu mm with 57% neutrophils, 5% band cells, 23% lymphocytes, and 16% monocytes; sedimentation rate 20 mm/hour; serum glutamic-oxalacetic transaminase 42 Karmen units; serum glutamic-pyruvic transaminase 105 Karmen units; lactic dehydrogenase 93 Wacker units; antistreptolysin 0 titer 333 Todd units; C-reactive protein negative; VDRL negative. Throat culture was negative. Electrolytes, blood urea nitrogen, and creatinine values were normal. Roentgenograms of the chest and an electroencephalogram were normal.

Observation during the first few hours revealed continued fever, bradycardia, and a questionable red throat. The heart rate dropped to 28 beats/minute and treatment with Isuprel via intravenous drip was begun, but was terminated when bigeminy and short bursts of ventricular tachycardia developed. A transvenous demand pacemaker was inserted (demand rate 80/minute). Because of continued fever, medication with aspirin and penicillin was begun. For the next five days the patient remained on the demand pacemaker. She became afebrile in 24 hours. On the sixth hospital day the heart reverted to sinus rhythm, but first degree block, right bundle branch block, and left anterior hemiblock were present. She remained well, with only one brief period of pacing, during the remaining eight days of her hospital stay. She was discharged on a regimen of aspirin.

The final diagnosis was possible viral myocarditis affecting the conduction system.

Dr. Robert Williams, Pediatric Cardiologist: We will review the common cardiac arrhythmias and current therapy used in pediatrics.

Consider first the propagation pathways within the heart. The activation proceeds from the sinoatrial (S-A) node which is under vagal control. This pacemaker activates specialized propagation pathways within the atrium, which causes the atrium to contract. The excitation is spread to the junctional area commonly called the atrioventricular (A-V) node, in which there is a time delay. Atrial depolarization takes approximately 0.08 second with an

A-V nodal delay of about 0.08 second. After the propagation comes through the node, the excitation spreads rapidly from the bundle of His through the Purkinje fibers, and then the heart begins to depolarize from apex upwards. It is interesting that the order of propagation is in reverse order of embryological development, as the ventricle is formed first, the A-V node next, then the atrium, and last the S-A node. The intrinsic rate of the S-A node is faster than that of the atrial specialized pathways, which is faster than that of the A-V node, etc. Therefore, if the S-A node fails to activate, the specialized atrial, A-V-nodal, or ventricular pacemaker may respond. This is a "fail-safe" system in which a more primitive pacemaker may replace an inactive "superior" pacemaker.

The main way in which cardiac rhythms are seen by the cardiologist is a surface ECG. The electroactivation of the heart can be further evaluated with an internal ECG using an electrode catheter. An internal ECG can evaluate atrial, junctional, bundle of His and ventricular bundle activation. The evaluation can influence the choice of drug used in managing the arrhythmia.

The most common arrhythmias come from the sinus node. The one most frequently seen is tachycardia. Sinus tachycardia is age-dependent. In the neonate, 160 beats/minute is acceptable, but a resting heart rate of 140 beats/minute in an infant $<$ 2 years old, 100 beats/minute in a 2-8-year-old, or 90 beats/minute in an 8-12-year-old, could be tachycardia. Sinus tachycardia is usually a manifestation of some other underlying defect. There are about ten extra heart beats per minute for each degree of body temperature above 98.6 F orally. Therefore, if there is fever, anemia, increased metabolism, or hypoxia, treat the underlying symptom. An infant's heart can beat up to 200 times per minute with impunity; however, bradycardia can be serious. Infants with heart rates of 60 to 80 beats/minute, particularly in the newborn period, may become acidotic. When bradycardia is noted in an infant, adequacy of temperature and air exchange should be evaluated. Then consider administering 0.1 mg atropine intravenously, which is an adequate dose for an infant. This should increase the heart rate, and the improved circulation may correct the acidosis and hypoxemia.

Sinus arrhythmia is seen most in older children. On inspiration the heart beats faster to take advantage of the air-gas exchange, and then slows on exhaling when there is less air in the lungs. Sinus arrhythmia is within normal limits if there is less than a beat-to-beat change of 50 beats/minute. Abnormal sinus arrhythmia is seen with cerebral trauma, increased intracranial pressure, and brain tumors.

In premature atrial contraction, which is not uncommon, there is another focus within the atrium competing with the sinus rhythm. There are two classifications of arrhythmias: default and usurpation. If the sinus node fails to beat as anticipated, then another more primitive pacemaker will take over. This may be a low atrial pacemaker. Since the sinus pacemaker is late and another pacemaker responds, the arrhythmia occurs by default. However, if an ectopic pacemaker fires before an anticipated sinus beat, this is an arrhythmia of usurpation. If this occurs in the atrium, it is a premature atrial contraction which is not an uncommon transient finding in the first 24-48 hours after birth. Only if atrial tachycardia occurs should there be any concern. When, in older children, premature atrial contractions decrease with exercise and with an increased heart rate, this can be considered an innocuous rhythm.

Paroxysmal atrial tachycardia is different from sinus tachycardia in that there is an absolute metronome heart rate of 180 beats/minute and 300 beats/

minute. Sinus tachycardia will show subtle variations with breathing, Valsalva maneuver, and increased pressure on the carotid artery or eyeball. However, in paroxysmal atrial tachycardia the absolute heart rate will be unvarying unless it is converted, by these maneuvers, to a sinus rhythm, which will be much slower.

One of the predisposing factors to paroxysmal atrial tachycardia is an anatomical abnormality in the propagation pathway called the Wolff-Parkinson-White syndrome in which there is a short-circuit or bypass around the A-V node. This situation can cause circus motion that makes an individual a good candidate for paroxysmal atrial tachycardia. In the newborn period paroxysmal atrial tachycardia is not uncommon, but one must consider the possibility of myocarditis. In most cases of paroxysmal atrial tachycardia, no cardiac defect is apparent.

The time honored way of treating paroxysmal atrial tachycardia is to press on the eyeballs or massage the carotid arteries. This usually is unsuccessful in infants. It may be successful in older children or young adults. There are some pharmacological aids: Neo-Synephrine is an alpha stimulator and it is a paradoxical way to treat, as the alpha stimulator elevates the blood pressure and causes a vagal rebound that frequently stops the paroxysmal atrial tachycardia. The dosage of Neo-Synephrine is 0.1 mg/kg of body weight given intravenously, and the response takes approximately three to five minutes. The classic drug of choice in atrial tachycardia is digitalis; the usual total digitalizing dose of digoxin (Lanoxin) is approximately 0.06 mg/kg of body weight given over a 24-hour period. If the tachycardia remains resistant, digoxin along with propranolol (Inderal) may be used and the dosage is about 1 mg/kg of body weight/day in divided doses every six hours.

Electrocardioversion is, in my opinion, the first treatment of choice in most cases of paroxysmal atrial tachycardia. It is well to prepare the patient with diazepam (Valium), about 1 mg/5 kg of body weight administered intravenously. This will sedate, but more importantly, it will make the patient amnesic. The biggest paddles possible to fit the patient should be used, as the smaller the paddles, the more likelihood of burning the skin. Also, use adequate electropaste in order to have the least amount of resistance. Most of the modern electrical converters have a synchronizing mechanism which fires the electrical impulse during the QRS. This prevents a stimulus in the vulnerable period which may cause ventricular fibrillation. There are two ways to apply the paddles. The patient may lie on his back on a metal conductor and a paddle is placed on his chest. This is probably better for children because there is greater surface area contact. The other method is with anterior paddles; one is placed at the right upper sternal border and the other at the apex of the heart. How much electricity is needed for cardioversion? Approximately 1 watt-second per pound of body weight. Many people, when they first use cardioversion, approach it with fear because there is something unnatural about stopping a heart with electricity. Yet it is probably the most innocuous and expedient way to treat certain arrhythmias. With paroxysmal atrial tachycardia in younger children I prefer to use cardioversion first and, if that is unsuccessful, then start with the age-honored methods of digitalis, Inderal, quinidine or other medications. The rationale is that frequently the digitalis preparations require 6 to 24 hours before the arrhythmia can be converted. Many of these infants may have been sick for some time and this illness can be dramatically and instantaneously cured. The other reason, and probably more important, is that after digitalization the heart is more vulnerable to ventricular flutter or fibrillation and thus there is

more danger in electroversion. Therefore, in children who come in with paroxysmal atrial tachycardia, the first treatment of choice is electrocardioversion. Electrocardioversion should not be used when a patient is varying between sinus rhythm and an arrhythmia; a pharmacological approach should be used instead.

The next rhythm is atrial flutter. This is a rhythm in which the atrium fires at a rate of approximately 300 times per minute, and there is a sawtooth formation to the baseline. There is a circus rhythm within the atrium that is a definite pathway, and this is not uncommon in the newborn period, or postoperatively in repair of transposition of the great arteries. This is an organized rhythm in which there is a circus motion within the atrium with an atrial rate of approximately 300 beats per minute. If this is allowed to continue at a faster rate, atrial fibrillation may occur, which is an unorganized rapid atrial rate. Children $<$ 2 years old do not often have atrial fibrillation because atrial fibrillation is a random, chaotic depolarization requiring a large atrial mass. It is impossible to evoke atrial fibrillation in the rabbit, but transient atrial fibrillation can occur in dogs of about 15-30 kg, and atrial fibrillation in a horse can't be stopped. In pediatrics we see atrial fibrillation only in larger or older children who have very large atria, such as tricuspid atresia or severe rheumatic mitral insufficiency.

Electroversion probably is the quickest and safest way to treat atrial flutter. (Digitalis is the first drug of choice for treatment of atrial flutter. Inderal can be used if the digitalis is unsuccessful.) The duration of the atrial fibrillation should be considered before treating; if the arrhythmia has been present for more than two weeks, anticoagulant medication prior to electroversion is indicated. In fibrillation there is such a chaotic distribution of depolarization that there is no active contraction within the atrium, and this may cause clot formation. Therefore, these children should be heparinized at twice the control partial thromboplastin time, preferably a week before electroversion is attempted. The efficiency of the heart is increased approximately 20% on changing from atrial fibrillation to sinus rhythm.

A common ventricular arrhythmia is bigeminy, in which there is a normal sinus beat followed by an aberrant type of contraction. The QRS is wider and the T-waves go in opposite directions. "Bigeminy" comes from the Latin word for "twin," and infers that there is a coupling of a sinus beat and an abnormal beat. The distance between sinus QRS and ectopic QRS is a fixed interval. If the bigeminal rhythm occurs intermittently, infrequently, and is diminished with exercise, there is no reason to treat it. If it occurs frequently and interferes with cardiac output, then therapy is needed. Probably the most common treatable bigeminy rhythm is with patients on digitalis. The first step is to remove or decrease the digitalis. Dilantin, 5 mg/kg of body weight given over a 10- to 15-minute period is helpful in acute bigeminal rhythm secondary to digitalis.

When ventricular ectopic beats occur one after the other there is ventricular tachycardia. Digitalis is contraindicated in this disorder. This may look similar to paroxysmal atrial tachycardia, and the symptoms can be exactly the same. An ECG should be obtained, because the treatment of choice in atrial tachycardia is digitalis; however, if a patient with ventricular tachycardia is treated with digitalis, ventricular flutter or fibrillation may occur. For every patient with tachycardia, an ECG is imperative. The first drug of choice in ventricular tachycardia is Xylocaine, 1-2 mg/kg of body weight via intravenous push. This can be repeated again in five minutes if the ventricular tachycardia recurs; start a constant intravenous infusion of Xylocaine at the rate of 30 mg/kg of body weight/24 hours. Again, electrocardioversion is the

quickest method of treating the disorder. Quinidine given at 30 mg/kg of body weight/day orally may control recurrent ventricular tachycardia. Other drugs used for ventricular tachycardia are Pronestyl 30 mg/kg of body weight/day, or propranolol (Inderal) 0.1 mg/kg of body weight intravenously. Many times several drugs in combinations are needed. It is similar to treating convulsive disorders with depressive medications to establish a proper therapeutic response. A more recent advance in treatment of ventricular tachycardia is called "overdrive." This is done by placing a pacemaker catheter within the ventricle and pacing the ventricle at a rate faster than the normal sinus rate. This will prevent the ventricular tachycardia from occurring. This is particularly helpful in patients with myocarditis who are sensitive to digitalis. These patients need increased contractility, and quinidine or propranonol will diminish the contractility of the heart.

In third-degree heart block, which is the type presented in this case, there is no propagation or influence from the atrium to ventricular area. Neonates may have severe heart failure and die with a slow heart rate of only 50-60 beats/minute. In an older child, this slow heart rate may result in severe congestive heart failure. This is best treated by placing an electrode in the ventricle and pacing the heart as was done in this case. The pacemaker electrode is placed within the heart, and then the current is doubled.

The child in this case probably had myocarditis with a transient heart block. The child's life was saved by pacing the heart. This patient has recovered her innate pacemaker ability. Many children do not have the ability to recover pacemaking function, and a permanent pacemaker has to be used.

Finally, polarizing solutions deserve mention. Increasing the potassium within the cell can decrease arrhythmias and improve contractility. We have found this to be extremely helpful in patients with myocarditis who have poor cardiac contractility and multiple arrhythmias. Digitalis and cardiodepressants such as quinidine or propranolol may be contraindicated. We use the polarizing solution, which is 1 liter of 10% dextrose, 40 mEq potassium, and 20 units of insulin. This is given intravenously at 1,600 ml per square meter of body surface per day.

Question: In third-degree heart block, is Isuprel used?

Dr. Williams: Yes. It is usually not effective except in the congenital form of third-degree heart block, but may on occasion be helpful in the noncongenital form of third-degree heart block. Sometimes the heart rate can be increased and the contractility can be improved. In this patient, Isuprel was tried, but arrhythmias occurred. Therefore, the dangers of arrhythmia probably make it only a temporary method until a pacemaker can be used.

Question: The most frequent "arrhythmia" that we have is cardiac arrest. We have been told a number of times that you should not give epinephrine because if the patient's heart stops in the midst of fibrillation and you give epinephrine, the heart will not start beating again. Is this true?

Dr. Williams: If a monitor is readily available, you should wait for the monitor while using external massage to see if fibrillation is present. The reason for this is that if atrial or ventricular flutter fibrillation is present, it makes the heart much more irritable with epinephrine. So, ideally, you should monitor the heart, but there are instances in which monitors are not available and then you may use epinephrine and hope.

The participants are from the Department of Pediatrics, Russell J. Blattner, MD, professor and chairman, Baylor College of Medicine, Houston 77025.

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Tribute to Egerton Y. Davis, or: Long live the baby on the track

Fred C. Rehfeldt, MD

Egerton Y. Davis, on Dec 4, 1884, wrote a letter to the editor of *Medical News* which was published in the Dec 13 issue, the same year:

Dear Sir:

The reading of an admirably written and instructive editorial in the Philadelphia *Medical News* for 24th November, on forms of vaginismus, has reminded me of a case which bears out, in an extraordinary way, the statements therein contained. When in practice at Pentonville, England, I was sent for, about 11 P.M., by a gentleman whom, on my arriving at home, I found in a state of great perturbation, and the story he told me was briefly as follows:

At bedtime, when going to the back kitchen to see if the house was shut up a noise in the coachman's room attracted his attention, and, going in, he discovered to his horror that the man was in bed with one of the maids. She screamed, he struggled, and they rolled out of bed together and made frantic efforts to get apart, but without success. He was a big, burly man, over six feet, and she was a small woman, weighing not more than ninety pounds. She was moaning and screaming, and seemed in great agony, so that, after several fruitless attempts to get them apart, he sent for me. When I arrived I found the man standing up and supporting the woman in his arms, and it was quite evident that his penis was tightly locked in her vagina, and any attempt to dislodge it was accompanied by much pain on the part of both. It was, indeed, a case "De cohesione in coitu." I applied water, and then ice, but inneffectually, and at last sent for chloroform, a few whiffs of which sent the woman to sleep, relaxed the spasm, and released the captive penis, which was swollen, livid, and in a state of semi-erection, which did not go down for several hours, and for days the organ was extremely sore. The woman recovered rapidly, and seemed none the worse.

I am sorry that I did not examine if the sphincter ani was contracted, but I did not think of it. In this case there must have been also spasm of the muscle at the orifice, as well as higher up, for the penis seemed nipped low down, and this contraction, I think, kept the blood retained and the organ erect. As an instance of Jago's "beast with two backs," the picture was perfect. I have often wondered how it was, considering with what agility the man can, under certain circumstances, jump up, that Phineas, the son of Eleazer, was able to thrust his javelin through the man and the Midianitish woman (*vide* Exodus); but the occurrence of such cases as the above may offer a possible explanation.

Yours truly,

Egerton Y. Davis,
Ex. U. S. Army.

Caughnawaga, Quebec,
4th December, 1884.

The *Canadian Medical and Surgical Journal*, later (1887) published a letter describing an *accouchement chemin de fer*, written in the style of Egerton Davis, but signed by Sir William Osler:

An Accouchement In A Railway Closet

A young woman about twenty-eight years of age, well developed, of medium size, had had two previous labors, which were not difficult. She had expected her confinement in a week or ten days, and had got on the

train to go to see her husband, who was working "down the track." Having a slight diarrhea she went to the water-closet, and while on the seat labor pains came on and the child dropped from her. Hearing a noise and groaning, the conductor forced open the door and found the woman on the floor in an exhausted condition, with just strength enough to tell him that the baby was somewhere on the track, and to ask him to stop the train, which was running at the rate of about twenty miles an hour. The baby was found alive on the side of the track a mile or more away, and with the mother was left at the station where I saw her. She lost a good deal of blood, and the placenta was not delivered for some hours.

What of the veracity of these astonishing case reports? Indeed, questions were raised at the time these events were reported.

The editorial which Egerton Davis mentioned as the provocation for his letter to the *Medical News* was by Theophilus Parvin, a somewhat priggish, but scholarly obstetrician, who wrote, in part:

An Uncommon Form of Vaginismus

. . . The late Dr. Sims, in a paper communicated to the London Obstetrical Society by Dr. Tyler Smith in 1861, stated that, by the term vaginismus, he proposed to designate "an involuntary, spasmodic closure of the mouth of the vagina, attended by such excessive supersensitiveness as to form a complete barrier to coition." Dr. Sims did not describe a new disease—indeed, he disclaimed any such attempt. Dr. Louis Debrand, who has recently published an important monograph, *Des Rètrécissements du Conduit Vulvo-Vaginal,* states that Huguier, in 1834, was the first to describe spasmodic contraction of the vaginal sphincter. . . .

Hildebrandt, who has written, in Billroth's *Handbuch der Frauenkrankheiten,* probably the best article upon vaginismus to be found, remarks: . . . cramp of the levator ani may cause contraction of the upper part of the vagina, so that a speculum, or a swollen glans penis, as in coition, may be forcibly retained.

The form of vaginismus last mentioned has recently been considered again by Henrichsen in the *Archiv für Gynäkologie.* The author refers to the observations of Scanzoni, and those of Hildebrandt, in which the penis was retained captive by woman's genital organs, after coitus, by a phenomenon analogous to that observed in certain animals, especially the dog. . . .

George Gould and Walter Pyle compiled the most unbelievable collection of medical lore in their volume, *Anomalies and Curiosities of Medicine,* 1896, and they did include some reports of penile entrapment. One is as follows:

Henrichsen quotes a case in which a spasmodic contraction of the levator ani occurred during coitus, and the penis could not be withdrawn while this condition lasted. . . . In this connection, among the older writers, Borellus gives the history of a man who before coitus rubbed his virile member with musk, and, similar to the connection of a dog and bitch, was held fast in his wife's vagina; it was only after the injection of great quantities of water to soften the parts that separation was obtained.

Why has no incident of entrapment been published in the 20th century?

It is unlikely that such an interesting event would go unnoticed, and with the

rate of exposure at an all-time high it must be assumed that this is a medical hoax, or a fabrication of the surgery dressing room or of the local men's tavern. Eight professors of gynecology and obstetrics were queried by letter, and all replied that they were unaware of such an event.

One of these, Allan C. Barnes, MD, of the Rockefeller Foundation, wrote that he "always assumed it was a (male made) myth under the general heading of penis preservation."

Since we must consider Davis' case report a hoax, can we be sure that Henrichsen, Borellus, and Debrand were truthful?

I again reviewed *Anomalies and Curiosities of Medicine,* and was startled to find a reference to the *accouchement chemin de fer:* "Probably a newspaper fabrication, that a woman while at stool in a railway car gave birth to a child which was found alive on the track afterward."

The railway stool of another era lacked some of the equipment which Mr. Crapper had included in his design of a water closet, the excrement passed through a pipe which opened directly upon the roadbed which one could see passing beneath. (The proximity of tender anatomy to the roadbed below has suggested many things to lively minds, such as the case of the unfortunate whose hemorrhoids wrapped around an axle.)

An article from *Archives of Internal Medicine* published in 1962, under the byline of the Doctor out of Zebulun (E. P. Scarlett, MB), attempted to establish the validity of the occurrence:

> But the main interest . . . lies in the story which it tells of what Francis* always called "the Baby-on-the-Track" case which was given wide publicity at the time. . . .
>
> It appears that in 1886 Dr. Osler, then at McGill University in Montreal, was invited by his brother, E. B. Osler, a Toronto business executive and railway director, to join him on a trip West. . . . In company with several railway officials on a formal tour of inspection, he travelled westward on the Winnipeg-Western Railway (later to be known as the Canadian Pacific Railway), the transcontinental line that had been completed not so many years before. . . .
>
> Midway across Canada at the town of Portage la Prairie, some sixty miles west of Winnipeg the group made a stopover. . . . The guide for this excursion was a man called Fred Brydges who told his visitors of an incident that had occurred two days previously, when a baby had been born in a railway closet and dropped on to the track. The train had been stopped and the baby and mother taken to shelter in the town (Portage la Prairie). Osler, as can be imagined, was tremendously interested, interviewed the mother, examined the child which seemed no worse for this unceremonious entry into the world, and secured affidavits from all the parties concerned.

A full account of the incident, headed "Accouchement in a Railway Closet," was published in the *Canada Medical and Surgical Journal* (16:375 and 732, 1887-1888) and later abstracted in the *Medical Record* (33:97, 1888) causing much startled protest.

Dr. F. H. Lyons of Winnipeg, Manitoba, aware of the controversy about this remarkable obstetrical feat, sent to the

*Dr. W. W. Francis, Osler Librarian of McGill University, Montreal.

New York Medical Journal (47:332, 1888) a clipping from the *Manitoba Daily Free Press,* dated March 5th, which described the event, and added:

> A short time after the occurrence, a Philadelphia physician traveling along the M. & N. W. Ry., hearing of it, went to see the child, and on his return home published the account. His veracity is now challenged, and the New York Medical Journal, speaking of it, characterizes the man as a lunatic that would believe such an improbable story. This annoyed the Philadelphia man, and he has written to General Superintendent Baker for affidavits from the trainmen, and they have been promptly furnished.

Dr. George Blumer, who was a resident at Johns Hopkins Hospital from 1893 to 1896, vows that he saw the affidavits in a drawer in the hospital library (*Archives of Internal Medicine* 84:34, 1949). Dr. M. Pierce Rucker, who has studied Osler's obstetrical ventures, has concluded that the papers are lost.

There is every reason to feel that the "baby-on-the-track" was not a hoax. Dr. Lyons and the general superintendent of the Canadian Pacific Railroad seemed to be convinced, but Osler never pressed the matter.

An addendum to the tale is provided by Dr. Francis, who observes that in the *Montreal Medical Journal* (17:557-558, 1889) there appeared the following rueful item signed by Osler:

> For the following, I blame that case of railroad delivery which has evidently given me a most fictitious reputation. A few days ago I received an urgent summons to come at once to an address at the northern part of the town. On arrival I found my confrere looking very tired and distressed after an anxious night with a primapara. He greeted me with the information that one child had been born, but that he did not know what to do about the second, as he believed there was an hourglass contraction of the uterus. I assured him that our course of action was clear; we sent at once for an obstetrician. I had difficulty in convincing him that I was not a professor of the art, but he persisted that my reputation was associated in some way with obstetrics, and brought up that northwest case! What I have suffered on account of that baby! To be jeered at by the French Journals, to be called by the editor of the *Medical Record* a narrator of funny stories, to be referred to by my friends as Münchausen—these things have been hard to bear, but on the strength of that case to develop a consulting practice in obstetrics is indeed a warning. Hereafter I shall stick to my last.
>
> (sgd.) William Osler

For a man who was not a distinguished physician, Egerton Y. Davis achieved an extraordinary measure of immortality and created a memorable controversy with a single published report—a letter to the editor.

His style was that of natural raconteur who grabs the reader's interest and who develops his story with a keen sense of timing and suspense, sprinkling it with whimsy, folklore, and classical references.

In July of 1919, an editorial in the *Lancet* referred to Egerton Yorrick Davis as being one of Sir William Osler's favorite authors, and further states that it was Osler, in fact, who saved Davis, his son, and his grandson from oblivion.

The best description of him is from the

pen of Sir William Osler himself:

> I could never understand about Egerton Yorrick Davis. He is represented to have practiced in Caughnawaga nearly opposite Montreal, where his collection was stored in the guildhall. Some have said that he was a drunken old reprobate, but the only occasion on which I met him, he seemed a peaceful enough old rascal. One thing is certain, he was drowned in the Lachine Rapids in 1884, and the body was never recovered. He had a varied life—in the U. S. Army; in the Northwest; among the Indians; and as a general practitioner in the North of London. I knew his son well—a nice mild-mannered fellow, devoted to his father.

Since we know that Davis lived his last years in Canada, it is reasonable that his searching mind and handy pen would have led him to write about his environment. Among Sir William Osler's private papers there is a manuscript, "Professional Notes Among the Indian Tribes About Great Slave Lake, N.W.T.," by Egerton Y. Davis, MD, late US Army Surgeon, 1882.

One should not be surprised to find this in Osler's possession since as a famed editor he was a likely one to whom Egerton Davis might have submitted a manuscript.

Gould and Pyle did not include the entrapment case or the incident of the baby on the track in *Anomalies and Curiosities of Medicine,* because as contemporaries of Davis and Osler, they knew that Egerton Y. Davis was not only Osler's *nom de plume* but also his alter ego. An alter ego is more than a pen name; it is a projection of personality. Osler used it not only when writing, but when lunching with Halstead, Welch, and Cushing he frequently referred to Davis.

Why did Osler not use the name of Egerton Y. Davis for the baby-on-the-track report? It would have been his style. One can only conclude that he believed the incident was true, thought it worth recording, and, to be sure, it was not without its amusing aspects. Had it been a fabrication he might have attributed it to Davis.

The real satirist does not hope to deceive, but wishes to romp and play in the language of his discipline, amusing those who are knowledgeable, exposing those who are ignorant, and deflating the pomposity of the humorless.

The alter ego Egerton Y. Davis allowed Osler the privilege of enjoying the surgical half of himself. James Barrie who also created an alter ego, M'Connachie, said, "I am the half that is dour and practical and canny, he is the fanciful half . . . who prefers to fly around on one wing. I should not mind him doing that but he drags me with him."

The lively, imaginative, creative, charming, lovable, and witty Egerton Y. Davis was intelligent, not an intellectual; worldly, not sophisticated; empirical, not a scientist—in short, he exhibited those attributes typical of a surgeon.

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Presented at the annual meeting of the Texas Surgical Society, April 2, 1973, Galveston.

Involving physicians in hospital governance

Morris Maple, MHA

The question is no longer "Should the physician be part of the hospital governance?" but rather, "How can the physician be part of hospital governance?" Some critics contend that because hospitals are goal-oriented organizations, and because their primary mission is patient care—ordered and directed principally by physicians—the physicians should to a greater extent be brought into the high-level board positions to influence policy and management of hospitals. One cannot lose sight of the fact that the hospital exists in order to insure that the sick of a community receive the best possible chance of cure or improvement.

Hospitals are becoming community organizations; irrespective of their sponsorship, they are no longer just facilities for acute inpatient care, but repositories of the communities' health care resources, the coordinating centers, and the identifiable points of access to medical care. As Walter McNerney of Blue Cross Association, has said, "The precise course that our health services system is going to follow is heavily dependent on a better wedding of management skills and clinical necessities."[1] If the hospital develops organizational forums excluding the physicians from its governance and management, physicians will be forced to deal with the hospital organization simply as another external pressure group through the conduit of the chief executive officer. This will force physicians to create other organizational forms to augment their collective power, already significant; they will either incorporate the medical staff organization, join medical care foundations, or form physician-patient controlled HMOs which will contract with the hospital for beds and services. Since physicians determine access utilization, cost, and quality, the control center will be external to the hospital organization.[2]

Thinking up to a few years ago was that there would be a conflict of interest with a physician trustee. Dr. Malcolm T. MacEachern, a pioneer in the health care field, cited ten reasons against physician membership on hospital boards:

1. Membership on the governing board gives undue publicity to the individual physician, thereby placing him in a position which he may not have earned by his professional efficiency and favorably affecting his private practice.
2. Physician members of the governing board may readily use their administrative position to promote themselves on the medical staff of the hospital.
3. Physicians appointed to the governing board often are not elected by the medical staff and therefore are not regarded by the other physicians as their chosen representatives.
4. Placing a physician on the governing board not only tends to create jealousy among his confreres on the medical staff, but blights the interest of other staff members who have no connection with the governing board.
5. The physician member of the governing board may be regarded by the medical staff as an inspector who is unduly critical of their work, his position thus becoming a barrier to cooperation between the medical staff and the governing board.
6. When the legal responsibility imposed upon a hospital trustee is considered, it is realized that a physician who is also a trustee might be subjected, under certain circumstances, to double jeopardy.
7. There is a tendency occasionally on the part of the medical representative to express his own personal judgment rather

than the collective opinion of the medical staff which he represents.

8. The hospital may encounter difficulty in adopting the commendable practice of making staff appointments annually if preferred physicians are retained on the governing board.

9. A physician on the governing board may exert his authority in the employment of hospital personnel, which eventually may lead to charges of favoritism, thereby disturbing the morale of the institution.

10. Leading hospital authorities and recognized national hospital organizations believe that it is an undesirable practice to have a member of the medical staff on the governing board of a hospital.[3]

The MacEachern doctrine of the 1930s lasted through the early 1950s when, in 1953, the American Hospital Association stated that "a member of the medical staff can be chosen to serve on the governing board." In the 1970s, the AHA has stressed the importance of close communication between the governing board, the administration, and the medical staff and the need for an effective mechanism to achieve this understanding. But the AHA does not believe that voting membership on the board of trustees by physicians who are elected or appointed by the medical staff ensures the best liaison between the governing board and medical staff.[4]

The American Medical Association's policy on MDs on hospital governing boards is summarized: "Where legally permissible, physicians actively practicing in the community who are voting members of the medical staff shall be eligible for, and should be accorded, membership on hospital governing bodies and their action committees, with full voting privileges, in the same manner as are other knowledgeable and effective individuals. They should be nominated by the medical staff and they should be willing and able to serve."[5]

In further support of physician participation on hospital governing boards, the revised standards for hospital accreditation, as adopted April 25, 1970, by the Joint Commission on Accreditation of Hospitals, contains the following language in its interpretive material: "Where legally permissible, physicians who are members of the medical staff shall be eligible for and should be included in membership on hospital governing bodies in the same manner as are other knowledgeable and effective individuals. Other physicians also should be considered eligible for membership on the governing body."[6]

Presumably, doctors should become more involved in the hope of helping to improve the health care system and because without them, some problems cannot be solved. When a hospital is planning its role in effectively delivering health services to a community, it would seem that its medical staff must be intimately involved, not just because physicians more than any other group have a concerned awareness of the medical needs of a community, but because physician advice may prevent costly errors in the planning, development, and operations of new facilities and services.

Methods

The purpose of this study was to determine physician participation in hospital management by means of membership on hospital governing boards in Texas.

A questionnaire was the mode used to gather information. A random sample was taken of 100 Texas hospitals ranging from 25 to 1,500 beds. The hospitals surveyed are classified by the AHA as nonprofit,

Bed Size of Hospitals	No. Hospitals Responding
25-100	17
101-299	34
300-500	11
500+	9

1. Bed size of hospitals responding to survey.

Bed Size of Hospitals	Average No. Physicians on Board	Average No. Years on Board
25-100	1.9	5.3
101-299	2.2	7.2
300-500	1.7	11.0
501+	1.7	3.0

2. Number and years of service of physicians on hospital boards.

	No. of Hospitals Affording Privileges to MD Board Members	%, Based on 42 Hospitals Having Physicians on Board
Discussion and participation	40	95
Voting	40	95
Hold office	33	78
Committee membership	37	88

3. Privileges accorded physician board members.

Physician participation limited to staff matters	7%
Physician has tendency to lobby or "politic"	7%
Physician(s) participates broadly and effectively and assists the board in its attempt to understand professional matters	85%
Physician relates to rest of board: Very well	64%
Well	30%
Poorly	2%

4. Performance ratings of physician board members.

voluntary hospitals. Seventy-one of the 100 questionnaires were returned.

Findings

Physicians on Governing Boards

Until about seven years ago, the hospital trustee functioned in the age-old pattern of part policy maker and part administrator. In many hospitals that pattern still exists, but in more and more places a corporate type of structure is gradually evolving with the trustee becoming solely a policy maker and chief executive officer becoming the president of the board with a vote. In this new corporate structure, the physician will be playing an important role in the development of health care delivery at all levels.

Of the 100 questionnaires distributed, 71 were returned. Fig 1 shows the breakdown by hospital bed size.

Of the 71 hospitals responding to the survey, 42 had physicians on their boards of trustees.

Rourke reminds us, "The physician-trustee must never be used as an errand boy to the medical staff or as an informer from the medical staff. That course would defeat the purpose of trusteeship. If he arrives on the board in a 'manner similar' to his fellow trustees, and independent of the medical staff, he must be afforded the same rights and privileges as other board members."[7]

From the questionnaire it was discovered that of the 42 hospitals with physicians on the Board, 66% of the physicians were selected in the same manner as other trustees. Being elected by the medical staff and ex-officio appointments through the staff lagged far behind as other means of selecting board members.

In 83% of the hospitals having physicians on the board, the length of term was

	Pleased	Apathetic	Displeased
Medical staff	83%	14%	3%
Board of trustees	92%	8%	0%
Administration	90%	4%	6%

5. Response of major factions to physician representation on hospital boards.

Attendance	Good	Fair	Poor
Physician	75%	19%	6%
Trustee	89%	9%	2%

6. Comparison of physician and trustee attendance at JCC meetings.

the same for physicians as for other trustees. This being the case, we can believe that the well-informed, conscientious physician has much to offer a hospital governing board; he also has a responsibility to his patients and to his colleagues to play an active, constructive role in formulating policy for the hospital.

Privileges which the physicians possess on the board are virtually the same as those of their lay counterparts (Fig 3). The hospital administrators felt that the physicians' attendance at board meetings ranged from good to excellent 99% of the time. Other aspects of physician participation, as rated by administrators, are shown in Fig 4.

Each of the three main factions (medical staff, trustees, administration) represented on the board were queried as to their feelings toward physician representation on the board. Responses are shown in Fig. 5. Why do administrators feel that physicians want board representation? The survey indicated the following: To improve the board's knowledge and work, 66%; to protect interests of medical staff, 50%; to seek and take power and control in the hospital, 9%; and because hospitals are medical organizations and physicians comprise the key professional component, 35%.

The administrators felt that physicians can serve on hospital boards of trustees as effective community representatives 85% of the time, and 76% of the administrators with physicians on the board feel that their participation works very well.

Other Means of Physician Participation in Management

There are other means of allowing physicians to participate in hospital decision making without direct representation on the hospital board. This other avenue, the joint conference committee (JCC), also was analyzed in this study.

On the questionnaire appeared the question, "Do you have a joint conference committee?" The response was that 92% of the hospitals surveyed have a JCC, and 8% do not. As to the JCC activity, 24% were considered to be very active, 57% moderately active, and 19% inactive. Of the hospitals having a JCC, 19% considered the JCC to be "crisis oriented," while 81% said the JCC wasn't utilized in a crisis atmosphere.

Sixty percent of administrators regard the JCC as an important liaison between board and staff; 24% believe that it sometimes provides mechanism for communication; and 16% consider it to be not much help in liaison between board and staff. Another finding was that 87% of the time, the physicians initiate anywhere from few of the agenda items of the JCC to half of the agenda. Physician attendance and trustee attendance at the JCC meetings is compared in Fig 6. The JCC was considered to be effective 65% of the time by both the physicians and trustees.

Hospitals have begun developing a meaningful role for physician participation on hospital boards of trustees, but even if the physician is not on the governing board he may be serving on one of its committees. Rourke has said that medical staff members should serve on board committees that deal with the day-to-day operation of the hospital. Since committees do not act but only recommend to the trustees, this method would involve a physician in every major policy study without diluting the board's ultimate responsibility.[7]

A question on the survey indicated the

	No. Hospitals	% of Total Survey
Long range planning committee	36	50
Executive committee	30	42
Finance committee	13	18
Administration committee	9	12
Purchasing committee	6	8
Personnel committee	4	5

7. Hospital and board committees having physician participation.

number of hospitals with physicians on either a hospital or board committee. Fig 7 shows those committees with physician participation. The physicians who are on these committees participate in the core discussion and recommendations of these committees 71% of the time. The administrators also stressed the fact that in 80% of the hospitals, the resources of medical staff leadership are utilized as much as possible.

Conclusion

The trend for the 1970s will be to incorporate more physicians into board positions. The hospital will become the focal point around which the local health system evolves. The hospital must become an organizational entity which combines the special quality of knowledge, skills, and community awareness of its governing board, the organizational expertise and management skills of administration, and the medical knowledge and skills of the medical staff.

With 59% of the hospitals surveyed having physicians on hospital boards, I would expect this percentage to grow not only in Texas but throughout the United States. Jorgensen says that there are four major reasons for physician participation on governing boards and in management:

1. Because quality and cost of care decisions are inseparable, governing boards and management will find it difficult to bring about fundamental changes or effective controls without including the patients' purchasing agent—the doctor—someplace in the deliberation.

2. The hospital board is responsible for the quality of professional care provided by the institution.

3. Federal and third-party interest in health care is creating greater public scrutiny.

4. There is a need for fundamental changes in the delivery of health care, such as progressive patient care, neighborhood health centers, areawide planning councils and expanded preventive health programs.[9]

Physicians who are on hospital boards have the same privileges as lay trustees 95% of the time, and their membership on the board is received extremely well by both administrators and trustees. It was also discovered that in 85% of the hospitals, the physicians are effective community representatives.

Of the total complement of hospitals, we find that 92% have physicians participating in some decision making processes. This is accomplished through the joint conference committee or hospital board committees such as executive, finance, purchasing, planning, personnel or administration. The pressures of the 1970s are building up for full trusteeship for physicians. This survey shows that the pressures are being met as 80% of the hospitals are utilizing the resources of medical staff leadership in their administrations.

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Mr. Maple, assistant administrator for education (SGE), USAF Medical Center—Wilford Hall, Lackland AFB, Texas 78236.

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Precautions: As with other thyroid preparations, an overdosage of SYNTHROID (sodium levothyroxine) may cause diarrhea or cramps, nervousness, tremors, tachycardia, vomiting and continued weight loss. These effects may begin after four or five days or may not become apparent for one to three weeks. Patients receiving the drug should be observed closely for signs of thyrotoxicosis. If indications of overdosage appear, discontinue medication for 2-6 days, then resume at a lower dosage level. In patients with diabetes mellitus, careful observations should be made for changes in insulin or other antidiabetic drug dosage requirements. If hypothyroidism is accompanied by adrenal insufficiency, such as Addison's Disease (chronic adrenocortical insufficiency), Simmonds's Disease (panhypopituitarism) or Cushing's syndrome (hyperadrenalism), these dysfunctions must be corrected prior to and during SYNTHROID (sodium levothyroxine) administration. The drug should be administered with caution to patie with cardiovascular disease; development chest pains or other aggravations of cardiov cular disease requires a reduction in dosage.

Contraindications: Thyrotoxicosis, acute myoc dial infarction. **Side effects:** The effects of SY THROID (sodium levothyroxine) therapy are sl in being manifested. Side effects, when they occur, are secondary to increased rates of bo metabolism; sweating, heart palpitations w or without pain, leg cramps, and weight lo Diarrhea, vomiting, and nervousness have a been observed. Myxedematous patients wi heart disease have died from abrupt increas in dosage of thyroid drugs. Careful observati of the patient during the beginning of any t roid therapy will alert the physician to any t toward effects.

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n most cases with side effects, a reduction of sage followed by a more gradual adjustment ward will result in a more accurate indication he patient's dosage requirements without the pearance of side effects.

sage and Administration: The activity of .1 mg. SYNTHROID (sodium levothyroxine) BLET is equivalent to approximately one grain roid, U.S.P. Administer SYNTHROID tablets a single daily dose. In hypothyroidism with- myxedema, the usual initial adult dose is mg. daily, and may be increased by 0.1 mg. ery 30 days until proper metabolic balance is ained. Clinical evaluation should be made nthly and PBI measurements about every 90 ys. Final maintenance dosage will usually ge from 0.2-0.4 mg. daily. In adult myxedema, rting dose should be 0.025 mg. daily. The dose may be increased to 0.05 mg. after two weeks and to 0.1 mg. at the end of a second two weeks. The daily dose may be further increased at two-month intervals by 0.1 mg. until the optimum maintenance dose is reached (0.1-1.0 mg. daily).

Supplied: Tablets: 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded, in bottles of 100, 500, and 1000. Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, U.S.P., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent. SYNTHROID (sodium levothyroxine) **for Injection** may be administered intravenously utilizing 200-400 mcg. of a solution containing 100 mcg. per ml. If significant improvement is not shown the following day, a repeat injection of 100-200 mcg. may be given.

1. Braverman, L. E., Ingbar, S. H., and Sterling, K.: Conversion of Thyroxine (T_4) to Triiodothyronine (T_3) in Athyreotic Human Subjects, J. Clin. Invest. *49*:855-64, 1970.
2. Surks, M. I., Schadlow, A. R., and Oppenheimer, J. H.: A New Radioimmunoassay for Plasma L-Triiodothyronine: Measurements in Thyroid Disease and in Patients Maintained on Hormonal Replacement. J. Clin. Invest. *51*:3104-13, 1972.

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In fact, there are no known contraindications to the use of Vasodilan in recommended oral doses, other than that it should not be given in the presence of frank arterial bleeding or immediately postpartum.

1. Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500 and Unit Dose.

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20 CURBSTONE CONSULTATIONS
Person-to-person conversational discussions of cases and problems of general medical interest.

15 CONTINENTAL BREAKFAST PRESENTATIONS
Have breakfast with a guest speaker on Friday and Saturday mornings. Enjoy coffee and rolls while the speaker presents a 15 to 20-minute lecture. Then participate in the informal 35-minute open forum which will follow.

35 SPECIAL SOCIETY PROGRAMS

10 SPECIAL COMMITTEE SYMPOSIUMS

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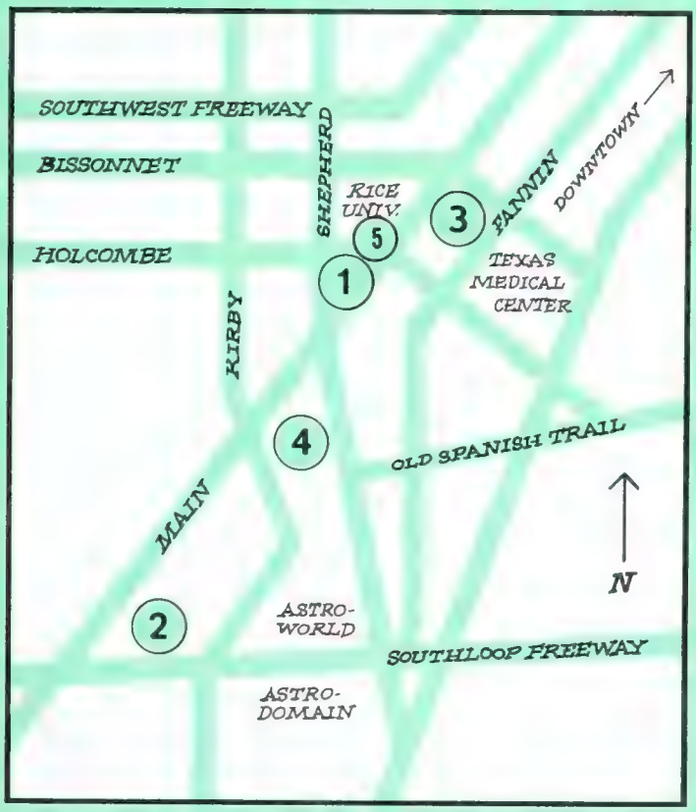

ANNUAL SESSION
MAY 9-12, 1974
HOUSTON

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Twins $25-$33
Suites $55 & up

2 ASTROWORLD HOTEL/MOTELS
Business Sessions
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3 WARWICK HOTEL
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HOUR _____ PM PM

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1801 NORTH LAMAR, AUSTIN, TEXAS 78701

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Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions listed below. Fill out the advance ticket order form, mail it to TMA with your check, and your tickets will be waiting for you.

Friday, May 10, 12:30 p.m., Shamrock Hilton. Featured speaker will be Russell B. Roth, M.D., President, American Medical Association, Erie, Pennsylvania, who will discuss "Choosing the Legislative Rx for Medical Care."

Saturday, May 11, 12:30 p.m., Shamrock Hilton. Speaker pending.

WORLD—A gala evening is planned for you, featuring cocktails, dinner and dancing, Saturday, May 11.

TATIONS—Friday, May 10 and Saturday, May 11, 8:15-9:30 a.m., Shamrock Hilton. There is no charge, but attendance is limited and tickets necessary. Have coffee and rolls with a guest speaker, then participate in an informal discussion period.

GUEST SPEAKERS

DAVID L. BARCLAY, M.D.
Little Rock, Ark., obstetrics and gynecology

MARTIN E. BLAZINA, M.D.
Los Angeles, Calif., orthopaedic surgery

G. M. BLEEKER, Prof. dr.
Amsterdam, The Netherlands, Ophthalmology

BURIS R. BOSHELL, M.D.
Birmingham, Ala., endocrinology

C. HARMON BROWN, M.D.
Hayward, Calif., internal medicine and sports medicine

HENRY BUCHWALD, M.D.
Minneapolis, Minn., surgery

GEORGE E. BURCH, M.D.
New Orleans, La., cardiology

EWALD W. BUSSE, M.D.
Durham, N. C., psychiatry

MR. JACK DOUGLAS
Fort Worth, Tex., Editor

HAROLD L. ENGEL, M.D.
Los Angeles, Calif., law and anesthesiology

MR. ART FRIEDMAN
Scottsdale, Ariz., consultant in health and physical fitness

JAY Y. GILLENWATER, M.D.
Charlottesville, Va., urology

I. MELBOURNE GREENBERG, M.D.
Freeport, N.Y., neurosurgery

HERSCHEL E. GRIFFIN, M.D.
Pittsburgh, Pa., public health

ROBERT P. HEANEY, M.D.
Omaha, Neb., internal medicine

GERALD G. HIRSCHBERG, M.D.
Berkeley, Calif., physical medicine and rehabilitation

MASON HOHL, M.D.
Los Angeles, Calif., orthopaedic surgery

JOHN E. HOOPES, M.D.
Baltimore, Md., plastic surgery

JOHN M. HOWARD, M.D.
Philadelphia, Pa., surgery

DOUGLAS W. HUESTIS, M.D.
Tucson, Ariz., pathology

J. T. JABBOUR, M.D.
Memphis, Tenn., pediatric neurology

EDMUND KLEIN, M.D.
Buffalo, N.Y., dermatology (tumor immunology treatment and research)

EDWARD T. KREMENTZ, M.D.
New Orleans, La., surgery

DONALD G. LANGSLEY, M.D.
Davis, Calif., psychiatry

MATTHEW A. LARKIN, M.D.
Miami, Fla., proctology

MR. WILLIAM FRED LUCUS
Indianapolis, Ind., medical director, Blue Cross

KEVIN M. McINTYRE, M.D.
Boston, Mass., cardiology

WILLIAM L. MORGAN, JR., M.D.
Rochester, N. Y., internal medicine

WIL B. NELP, M.D.
Seattle, Wash., internal medicine and nuclear medicine

OLOF H. PEARSON, M.D.
Cleveland, Ohio, internal medicine

HERBERT F. POLESKY, M.D.
Minneapolis, Minn., pathology

CHARLES E. POPE, II, M.D.
Seattle, Wash., gastroenterology

G. O'NEIL PROUD, M.D.
Kansas City, Kan., otolaryngology

CHARLES E. REED, M.D.
Madison, Wis., internal medicine (allergy and immunology)

F. P. RHOADES, M.D.
Detroit, Mich., family practice (geriatrics)

GUY F. ROBBINS, M.D.
New York, N. Y., surgery

RUSSELL B. ROTH, M.D.
Erie, Pa., President, American Medical Association

ARAN SAFIR, M.D.
New York, N. Y., ophthalmology

RICHARD D. SAUTTER, M.D.
Marshfield, Wisc., thoracic surgery

F. BLAIR SIMMONS, M.D.
Stanford, Calif., otolaryngology

NATHAN J. SMITH, M.D.
Seattle, Wash., pediatrics

ROGERS J. SMITH, M.D.
Portland, Ore., psychiatry

MRS. JACKI SORENSEN
North Ridge, Calif., President's Council on Physical Fitness and Sports

M. STUART STRONG, M.D.
Boston, Mass., otolaryngology

COACH PAUL URAM
Butler, Pa., coaching

HOWARD S. VANORDSTRAND, M.D.
Cleveland, Ohio, internal medicine (pulmonary diseases)

MORRIS WAISMAN, M.D.
Tampa, Fla., dermatology

JOSEPH P. WHALEN, M.D.
New York, N. Y., radiology

CONTINENTAL BREAKFAST PRESENTATIONS

Friday, May 10, 8:15-9:30 a.m.

1. THE DOCTOR AS WITNESS
   Harold L. Engel, M.D., LL.B.
   Los Angeles, California

2. UROLITHIASIS
   Jay Y. Gillenwater, M.D.
   Charlottesville, Virginia

3. NEW IDEAS IN CONSERVATIVE MANAGEMENT OF LOW BACK PAIN
   Gerald G. Hirschberg, M.D.
   Berkeley, California

4. CURRENT CONCEPTS IN BURN MANAGEMENT
   John E. Hoopes, M.D.
   Baltimore, Maryland

5. IMMUNOTHERAPY OF CANCER
   Edward T. Krementz, M.D.
   New Orleans, Louisiana

6. HYPERTENSION
   William L. Morgan, Jr., M.D.
   Rochester, New York

7. THE "SICK" PHYSICIAN
   Rogers J. Smith, M.D.
   Portland, Oregon

Saturday, May 11, 8:15-9:30 a.m.

8. DEPRESSION IN THE NEWBORN
   David L. Barclay, M.D.
   Little Rock, Arkansas

9. BRITTLE DIABETES
   Buris R. Boshell, M.D.
   Birmingham, Alabama

10. THE PROTRUDING EYE
    Prof. dr. G. M. Bleeker
    Amsterdam, The Netherlands

11. BLOOD COMPONENT THERAPY, 1974
    Douglas W. Huestis, M.D.
    Tucson, Arizona

12. UROKINASE IN PULMONARY EMBOLISM (PANEL)
    W. G. Johanson, Jr., M.D., Dallas, Texas, Moderator; Kevin M. McIntyre, M.D., Boston, Massachusetts; Wil B. Nelp, M.D., Seattle, Washintgon; Richard D. Sautter, M.D., Marshfield, Wisconsin

13. MARITAL COUNSELING
    Donald G. Langsley, M.D.
    Sacramento, California

14. BLOOD AND GUTS—The Management of Acute GI Bleeding
    Charles E. Pope, II, M.D.
    Seattle, Washington

15. INFANT NUTRITION
    Nathan J. Smith, M.D.
    Seattle, Washington

Oenophiles unite

Jack L. Eidson, MD

Oenology—the whole science of wine, its production, its care, its handling, and drinking—is coming into its own in the United States. Actually the sale and consumption of wine in Texas has had a fantastic growth in the last decade.

There is nothing my wife, Wanda, and I have done in the past 30 years that has been more fun, educational, romantic, and meaningful than our adventure into wine tasting. We have always loved wines, but our intense interest began over ten years ago when we took a wine-tasting course at Fort Worth's Neiman-Marcus. Our eyes were opened to the adventure and mysteries of opening a simple bottle of wine. We learned that a little glass of wine can make the most ordinary meal a delightful pastime.

Our interest led us to make trips to France, Germany, Italy, Mexico, and California. Everywhere we went, we found the people in the wine business the most cordial and hospitable—eager to exchange ideas and stories about wines.

We recommend wine at mealtime and for special occasions. Only a few—those who are allergic to wine, alcoholics, and those with liver disease—should never partake.

Wine is the oldest known beverage. A few quotations that I personally appreciate are:

Hippocrates—"Wine is wonderfully suitable for man in sickness as in health, if it is administered in proper and fair measure."

Martin Luther—"A man who does not love wine, women and song remains a fool his whole life long."

Dr. and Mrs. Eidson pose in the decoupaged stairwell leading to their wine cellar.

Benjamin Franklin—"Wine is constant proof that God loves us and loves to see us happy."

Louis Pasteur—"Wine is the healthiest and most hygienic of drinks."

Sir Alexander Fleming—"Penicillin may cure human beings, but it is wine that makes them happy."

Everyone, no matter his station in life, can afford a wine cellar. It can range from a beginning of 12 bottles stored in a closet to an actual cellar under a home. We dug our cellar under our house about eight years ago using a caterpillar tractor, an air hammer, swimming-pool gunnite equipment, and a lot of nerve. The big advantage of a cellar is the maintenance of a constant temperature. We decoupaged the stairwell to the cellar with wine labels from bottles we and our many friends had emptied.

Our wine tastes have to be described as orthodox. My advice to novices is to try all wines—those that you like and those that you are not familiar with. It takes time and a lot of wine drinking to become an expert, but soon you will learn that a middle-priced California wine is not really as good as Chateau Latour or a Romanée-Conti. But a

Editor's note: This article is the second of several to appear this year on physicians' hobbies. Appreciation goes to Dr. Eidson for his time and efforts in preparing this entertaining and informative article on oenology. A graduate of Baylor College of Medicine, Dr. Eidson has been practicing in Weatherford since 1950.

Admiring the wine's color and clarity is one step to pleasurable wine tasting.

A scarlet robe, black hat, and white gloves are worn by the grand council of the Brotherhood of St. Stephen.

balance can be struck between ordinary wines and the acme of French wines.

Remember that the best California wines are named after the varietal grapes themselves. If you want the best, you will buy not a Burgundy, but a Pinot Noir, not a claret, but a Cabernet Sauvignon, not a Rhine wine, but a Riesling, not a Beaujolais, but a Gamay Beaujolais.

As a rule of thumb, a dry white wine is served with fish or fowl, a dry red wine with red-blooded meat or fowl, a rosé with either, and champagne by itself, as an aperitif, or all through the dinner. Sweet wines are served by themselves or with desserts. As a general rule white wines are cooled and red wines are served at room temperature.

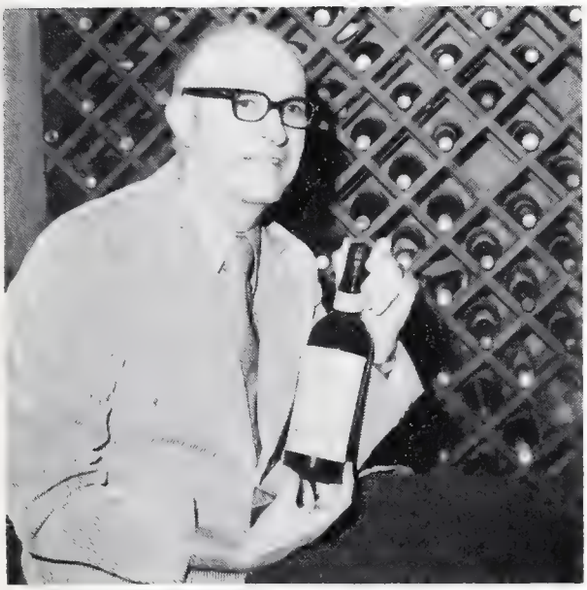
Wines are divided roughly into three classes: still or table wine, sparkling or champagnes (carbonated), and fortified like sherries, port or brandies. All these can be subdivided into sweet or dry, red or white and various degrees between.

Taste testing

Wine tasting is a pleasurable experience for all five senses from the popping of the cork and the gurgle of the wine being poured, to the last sip in the glass.

Generally speaking, pour wine into a clear tulip-shaped glass and only until it is one-third to one-half full. Look at the wine and enjoy its color and clarity. Then swirl and sniff the glass. There will usually be a distinct bouquet or aroma. Then taste the wine on and under the tongue, sipping air over the wine as though sucking on a straw. Finally, swallow the wine.

One of the more prized possessions in my personal collection is a bottle of 1862 Verdelho from the island of Madeira—one of only 388 bottles produced. I plan to open this bottle when my first son (I have



The Eidsons dug their own wine cellar with a "lot of nerve."

One of Dr. Eidson's prized possessions is a bottle of 1862 Verdelho.

four) or grandson graduates from medical school. Even if it tastes like vinegar, which I'm certain it won't, it will make a memorable occasion.

Writers use many poetic and flowery words to describe wines. One which I want to pass on to you is a writer's description of the spicy Alsatian Gewurztraminer: "This wine is clothed in velvet, it is perfumed, it is brilliant and it seduces the ladies, for it is potent and enchanting."

Texas has a commercial vineyard near Del Rio producing dry and sweet red and white wines.

About four years ago I was invited to become a founding member of the American Chapter of the "Confrerie St. Etienne" which means the Brotherhood of St. Stephen. This is the oldest organization sponsoring wines, having been founded in the 15th Century. The Brotherhood sponsors or promotes the wines of Alsace, France, which are 99% white and mostly from four varietal grapes—gewurztraminer, riesling, tokay, and muscat.

A scarlet robe and black hat and white gloves are worn by members of the grand council. They make the initiation a very colorful ceremony. It is held once a year in Fort Worth and twice a year in Colmar, France.

To get back to my title, "Oenophiles unite," I would like to organize a Texas chapter of doctors who are interested in the study and history of wines. A first meeting including an evening of wine, food, and comradeship is being planned for Thursday, May 9, at 8 pm, at the Houston Oaks Hotel, during the Texas Medical Association's Annual Session. Tickets are $35 per person. Reservations will be limited to 100 persons and should be made by April 15.

If you are interested in a state oenological society or just attending the dinner in Houston, please contact me at PO Box 696, Weatherford 76086.

Camping fun for the handicapped

Enjoyment of the outdoors and appreciation of nature through camping experiences enrich the lives of young and old alike. To the handicapped these activities have a special meaning.

With summer just around the corner, many physicians may receive inquiries regarding camping opportunities for the handicapped.

Under the auspices of many organizations, activities are numerous and diverse across the nation and the state. For instance, "camporees" sponsored by local Boy Scout groups across the country, provide camping opportunities to many hundreds of handicapped scouts each year.

In addition, a *Directory of Resident Camps for Persons with Special Health Needs* is published by the National Easter Seal Society for Crippled Children and Adults. Copies of the directory are available for $1 from the society, 2023 W Ogden Ave, Chicago, Ill 60612.

The following is a guide to some of the resident camps in and near Texas which have programs for various physical and/or mental handicaps and/or special health requirements. Some of the listings are based on 1973 information and may be subject to change. The listing, compiled as a service to physicians, does not represent TMA endorsement or sponsorship of any particular camping program, nor disapproval of programs not included.

BAPTIST DEAF YOUTH CAMP, Camp Trinidad, Trinidad. Impairments—deafness. Age range—10-21. Sessions—July 15-20, 1974. Capacity—200. Fee—$30. Coeducational. For more information, contact Texas Baptist Conference of the Deaf and Baptist General Convention of Texas, 307 Baptist Building, Dallas 75201.

CAMP HAPPYTIME, Commerce. Impairments—mental retardation. Age range—8-16. For more information, contact Northeast Texas Safety Service Institute, Jeffrey L. Ellis, director, P.O. Box 629, Commerce 75428.

CAMP HOPE FOR THE HANDICAPPED, Fort Worth. Impairments—unspecified physical disabilities and mental retardation. For more information, contact Camp Hope, 1300 W Lancaster, Fort Worth 76102.

CAMP LARCEE, Doyline, La. Impairments—mental retardation. Exceptions—severely retarded and wheelchair retardates. Age range—10-45. One 2-week session. Capacity—up to 100. Fee—$40, sliding fee scale available. Campership available. Coeducational. For more information, contact Louisiana Association for Retarded Children, 6844 Van Gogh, Baton Rouge, La 70806.

CAMP ROADRUNNER, Butman Methodist Church Encampment (30 miles from Abilene). Impairments—Trainable and educable mentally retarded. Exceptions—limited to residents of Region III of Texas Association for Retarded Children, Inc. (TARC). This area includes the counties between Snyder and Breckenridge on the north and San Angelo and Stephenville on the south. Age range—12-25. One 1-week session. Capacity—100. Fee—$40. Sponsors available. Coeducational. For more information, contact Butman Methodist Camp, Route 2, Merkel 79533 or Mrs. Peggy Allred, camp director, 3201 Sayles, Abilene 79602.

CAMP SOROPTIMIST, Argyle. Impairments—physical disabilities, unspecified, blindness, deafness, mental retardation. Age range—6-40. One 6-day session, physically handicapped, age 6-11; one 6-day session, mentally retarded, age 8-12; one 13-day session, physically handicapped, adults; one 13-day session, mentally retarded, adults; one 13-day session, physically handicapped, teenage; one 13-day session, mentally retarded, teenage. Capacity—72 each session. Fee—sliding fee scale available for Dallas County residents; out-of-Dallas County, 6-days $40;

Language and communication skills are part of the outdoor learning and recreation for campers at the Trail project. This camp for deaf and hearing-impaired children is a cooperative project sponsored by the Texas Education Agency, The University of Texas at Austin, county and bi-county wide day schools for the deaf, Education Service Center, Region XIII, and the Texas School for the Deaf. (Photo courtesy of Statewide Project for the Deaf.)

13-days $78. Some camperships. Coeducational. For more information, contact Camp Soroptimist, 6162 E Mockingbird, Dallas 75214.

CAMP SWEENEY, Gainesville. Impairments—diabetes. Age range—6-16. Three 3-week sessions. Capacity—300. Fee—$336, sliding fee scale available. Camperships available. Coeducational. Physical therapy. For more information, contact Southwestern Diabetic Foundation, c/o J. V. Campbell, Camp Director, P.O. Box 844, Gainesville.

CAMP WAGON WHEEL, Caldwell. Impairments—service limited to learning disabled. Age range—6-14. Two 4-week sessions. Capacity—70. Fee $400 per session. Coeducational. For more information, contact Dr. and Mrs. Gaar, P.O. Box 422, Caldwell 77836.

CAMP WEBWOOD, Elhart. Impairments—learning disabilities. Age range—5-14. Four 2-week sessions. Capacity—30 per session. Fee—$160 per two weeks. Coeducational. Physical therapy. For more information, contact Mrs. Mabel Webber, 4706 Stillbrooke Dr or Mrs. Lola Woodard, 6110 Fairdale, both Houston.

CAMP WIGWAM, (site is seven miles north of Amarillo). Impairments—mentally handicapped in trainable or educable categories. Age range—12 and up. Two 1-week sessions. Fee—$80, sponsors available. Coeducational. For more information, contact Gene Y. Brock, camp director, 537 Westhaven Dr, Hereford 79045.

DALLAS ACADEMY ROCKY RIVER RANCH, Dallas. Impairments—learning disabilities, minimal brain dysfunctions, physical disabilities. Exceptions—cardiac, uncontrolled epilepsy, blind, non-ambulatory. Age range—7 and up. Two 1-week sessions. Capacity—50. Fee—$85 per session. No camperships. Coeducational. For more information, contact Dallas Academy, 3845 Oak Lawn, Dallas 75219.

PRUDE RANCH, Ft. Davis. Impairments—mentally retarded (toilet trained, ambulatory, capable of feeding and dressing themselves and able to communicate their basic needs.) Exceptions—Camp is for TARC Regions 13 and 14. The area includes the portion of West Texas from Big Spring to El Paso. Age range—12 and up. One 1-week session. Capacity—120. Fee—$62.50. Assistance available. Coeducational. For more information, contact Prude Ranch, Box 534, Ft. Davis 79734.

RIMROCK RANCH, Wimberly. Impairments—educable and trainable mental retardation, multiple handicaps. Exceptions—non-ambulatory. Age range—10-plus. Two 1-week sessions (2nd and 3rd week of June). Capacity—100. Fee—$100 per week for Harris County residents; $125 for out-of-county residents. Coeducational. For more information, contact Harris County Center for the Retarded, Inc., 3550 W Dallas, Houston 77019.

TEXAS LIONS CAMP FOR CRIPPLED CHILDREN, Kerrville. Impairments—blindness, deaf-mute, physical disabilities, unspecified. Exceptions—mental retardation, nursing care cases, hemophilia, uncontrolled kidney and bowel cases, uncontrolled seizures, non-ambulatory, non-residents of Texas. Age range—7-16. Five 2-week sessions; ages 7-11, 12-16. Capacity—160 each session. No fee. Coeducational. For more information, contact Lions of Texas under Texas Lions League for Crippled Children, Inc., Box 247, Kerrville 78028.

Trail III activities for 1974 will include instruction in many outdoor activities such as horseback riding, fishing, swimming, canoeing, archery and crafts. (Photo courtesy of Statewide Project for the Deaf.)

TRAIL III, Camp La Junta, Hunt. Impairments—deafness, severely hard-of-hearing. Exceptions—50 hearing children are included to help deaf children relate to them and vice versa. Age range—7-12. One 2-week session, July 28-Aug 10, 1974. Capacity—150 deaf, 50 hearing. Most campers selected from the state's nine county-wide schools for the deaf. The 50 hearing children are selected at random, some from families of deaf children. For more information, contact Statewide Project for the Deaf, 5000 E Ben White Blvd, Austin.

Other summer camping programs for the retarded and contacts:

CAMP FLIPPER—Mr. Harvey Armintrout, 109 Chantilly, Port Lavaca 77979.

CAMP MIRASOL—Mr. Harold Means, Mackey School, Rt. 4, Box 177 A, San Antonio 78228.

LAKE MEXIA—Mr. Randall Bryan, Mexia State School, Box 1132, Mexia 76667.

CAMP STAR—Mrs. O. J. Jaloway, 49-1 Hakel Dr, Corpus Christi 78415.

CAMP BAYLOR—Mr. Bob Rhoades, Waco MH-MR, Box 1277, Waco 76701.

KINSOLVING CANYON LODGE—Ms. Marjorie Boniface, 1203 N 12th, Temple 76513.

LAKEVIEW METHODIST ASSEMBLY—Mr. Robert Cummings, Lufkin Council for Retarded Children, Box 672, Lufkin 75901.

Free-standing surgical center – a first for Texas

Surgery is an awesome experience for most patients—physically, emotionally, and financially.

A group of Austin physicians opened a facility last August which took these problems into consideration from the initial stages. The facility is the Bailey Square Surgical Center, a free-standing, outpatient unit owned, financed, and operated by the Austin Doctors Building Corporation.

Part of a growing innovative trend in health care delivery, the center is the largest free-standing surgical facility in the country in terms of both square feet and patient capacity. It is the first to open and be licensed in Texas, and it is a model for those to come. Three others, currently under construction, will be located in Houston, Dallas, and Jacksonville.

Members of the doctors' corporation had studied the progress of and had visited a similar institution, "Surgicenter," which was opened in Phoenix in February 1970 by two private practitioners. Surgicenter did not represent a new concept in outpatient surgery but rather a departure from the hospital locale. The facility was designed to handle the area of intermediate medical care—surgical cases which are too serious to be treated in the doctor's office but which do not require hospitalization. The facility was so successful that a second such facility was planned for another area of Phoenix. Free-standing centers have since received favorable comments from many segments of the health care community.

Planning efforts

Concluding that such a facility would serve the needs of the Austin community, members of the doctors' corporation met regularly for months planning the center's details, from the most advanced equipment to the balloons for young patients. Hospital consultants, engineers, and architects were called in to insure a functional design and good flow. Problems to be tackled included financing, building costs, insurance agreements, administrative procedures, staffing, and others. One by one, the doctors confronted these areas to make the $2 million project a reality.

In August 1972 Jesse V. Hayes, administrator of Austin's Holy Cross Hospital, assumed consultant duties. The following March a contract was signed with Holy Cross for the administrative services of Mr. Hayes, for the use of the Holy Cross computer services for billing, and for a transfer agreement.

Administrator Hayes assisted in the organization of the staff, regulations, and medical records system. Of his dual position, he said there has been little conflict of interests. He stated that at first hospitals in the city were apprehensive of the project, but the center is generally well accepted now.

Praising the concept of the center, Mr. Hayes estimated that outpatient surgery saves a minimum of 30% to 40% of the cost of an in-hospital stay for the same procedure.

Organized as closely as possible to a hospital department, the 17,000 square-foot facility houses six operating rooms, two cystoscopy rooms, one dental operating room, a 12-bed recovery room, 12 patient rooms, a cast room, a portable x-ray center, a supply room, eight dressing rooms, offices, lounges, and a reception area. The Bailey Square Surgical Center has a capacity of handling 60 patients a day although it has not yet reached its full operating level. Flexibility as well as anticipation of future changes in health care delivery were key considerations in the plan-

Children ride to surgery in a little red wagon. Pictured are some members of the center's staff, (l-r) Phyllis Griffith, RN, Norma White, RN, nursing director, Gertrude Rosson RN, and Jesse Hayes, administrator.

ning of the center. Plans not only conformed with but often exceeded required hospital standards as set by the Joint Commission on Accreditation of Hospitals. A medical doctor is on the premises at all times when patients are present. Center officials are proud of the care taken in equipping the prototype surgical facility and the numerous items to insure the efficiency of the surgical team.

Corporation manager M. K. Hage, Jr., emphasizing the efficiency of operations and planning, pointed out that the surgical center pays a malpractice insurance rate of only 12.5 cents per patient compared to a rate of $2.50 per patient for another plan.

Savings to the patient are realized in the fact that the free-standing center doesn't support the numerous departments that hospitals pay for such as an emergency room, cafeteria, laundry, obstetrics department, and a night staff.

Home-like atmosphere

A point emphasized by doctors using the center regarding patient acceptance and the atmosphere of the center is that its flexibility allows some things which don't fit into normal hospital routine. Surgery at Bailey Square is often a family affair, especially for the younger patients. No age restriction is imposed on visitors, permitting young children to accompany parents to patient rooms.

Children's rooms overlook a park and linens are brightly colored with favorite cartoon characters, contributing to a home-

The surgical center occupies the entire upper floor of Austin's Bailey Square Medical Building.

like environment. Children, taken to surgery in a little red wagon, are greeted afterward by "Bobo," the toy clown who sports a bandage in the same location as the young patient.

Adults, also, find bright surroundings and colorful patient rooms. The kitchen, stocked with soups and beverages, is available for the patients' and families' convenience. But, more importantly, the fact that the patient knows he will be home that evening has a psychologically advantageous effect and to a great degree relieves his apprehension of surgery.

The center has an open medical staff policy, making the facility available to all qualified physicians in the area. The center has been approved for a Blue Cross/Blue Shield contract and has applied for Medicare eligibility. Although the center is not open 24 hours a day, it would be eligible for Medicare if approved by the Secretary of the Department of Health, Education and Welfare as a demonstration project for cost savings. It is expected that action will be taken on this matter shortly.

In addition, center officials anticipate the development of accreditation procedures for free-standing centers by the JCAH. The facility has been licensed as a special hospital by the Hospital Licensing Division of the Texas State Department of Health.

Examining "Bobo's" bandage are Administrator Hayes and Nurse Griffith.

Dr. Robert E. Askew serves as chairman of the board of directors elected to supervise the operation of the center. Other members of this board include Drs. Joe Bailey, G. R. Beiter (DDS), K. Dyo, C. Dale Parker, and Pruett Watkins. Dr. John C. Buckley is chairman of the medical advisory committee. Other members of the Austin Doctors Building Corporation are also closely associated with the project.

MEDICINE AND THE LAW

MINORS CONSENT TO MEDICAL TREATMENT

As reported in the September *Texas Medicine,* the Texas Family Code has recently been amended and since Aug 27, 1973, the age at which a person becomes an adult has been lowered from 21 years to 18 years of age. Thus, any competent person may consent to medical or surgical treatment, including abortion, at the age of 18 years.

In addition, minors may consent to medical treatment if the minor:

(1) Is on active duty with the armed forces of the United States;
(2) Is 16 years of age or older and (a) resides separate and apart from his or her parents or guardian, with or without their consent, and regardless of the duration of such residence, and (b) is managing his or her own financial affairs regardless of the source of income;
(3) Consents to the diagnosis and treatment of any infectious, contagious or communicable disease which is required by law or regulation to be reported by the physician to a local health officer;
(4) Is unmarried and pregnant and consents to medical or surgical treatment, *other than abortion,* related to her pregnancy; (however, if the unmarried pregnant female is living apart from her parents and is 16 years of age or older, it would *appear* that she could consent to abortion just as she can consent to any other medical or surgical treatment, though this section of the Family Code may attempt to place abortion in a separate category from other medical treatment);
(5) Consents to examination and treatment for drug addiction, drug dependency, or other condition directly related to drug use.

This new section of the Family Code specifically provides that parental consent is not required where the minor's consent is granted under the exceptions set out previously.

The Code also authorizes that the physician may, with or without the minor's consent, advise the parents or guardian of the medical or surgical treatment needed by the minor. As a further protection the statute sets out that a physician shall "not be liable for the examination and treatment of minors under this section except for his own acts of negligence." Further, the physician is statutorily authorized to "rely on the written statement of the minor containing the grounds on which the minor has capacity to consent to his own medical treatment under this section." For this reason, the physician is urged to include an additional statement in the consent form which could read as follows:

"I certify that I am ____ years of age and that I was born on _____ (month), ____ (day), 19____.

If under 18 years of age, I further certify that:

(A) I am on active duty with the armed forces of the United States;
(B) I am over 16 years old, reside separate and apart from my parents, and manage my own financial affairs;
(C) I am seeking diagnosis and/or treatment for diseases or conditions which I believe may be infectious, contagious or communicable diseases;
(D) I am unmarried and pregnant and consent to medical or surgical treatment related to my pregnancy;
(E) I am seeking medical diagnosis and treatment for drug addiction, drug dependency, or other condition related to drug use."

If the patient certifies that he is 18 years of age or older, then no additional statement needs to be made regarding treatment. If

however, the patient is under the age of 18 and seeks medical treatment or diagnosis, then the minor should indicate on the consent form which exception he or she falls under by striking out the inapplicable exceptions. If the minor is suffering from a true medical emergency, then, of course, proper consent is implied.

In addition to consent for medical treatment by minors themselves, Chapter 35 of the Family Code also provides for consent of medical treatment by the following persons when the parent or guardian cannot be contacted and the actual notice to the contrary has not been given: (1) a grandparent (2) an adult brother or sister (3) an adult aunt or uncle (4) an educational institution in which the minor is enrolled and which has received written authorization to consent from the parent or guardian (5) any person who has care and control of the minor and has written authorization to consent to the medical treatment from the parent or guardian and (6) any court having jurisdiction of the child.

However, consent for treatment of a minor by those persons other than a parent or guardian, as set out above, must be *in writing* and contain (1) the name of the minor, (2) the name of one or both parents, if known, or the name of the managing conservator or guardian if appointed, (3) the name of the person giving consent and his relation to the minor child, (4) a statement of the nature of the medical treatment to be given, and (5) the day on which the treatment is to begin.

The new Family Code significantly lowers the age of adulthood and greatly broadens the authority of the physician to treat minors. However, the physician should carefully and meticulously secure the proper written consent in order to protect himself in treatment of all patients, but particularly those under the age of 18 where the statutory law sets forth the specific requirements for consent as spelled out above.

TMA Office of General Counsel
Sam V. Stone, Jr.

Medicine in literature

Identifying Suicide Potential
Edited by Dorothy B Anderson and Lenora J McClean, New York, Behavioral Publications, Inc, 1971, $7.45

This curious book includes a mixture of reasonably long papers, in which ideas are developed in some depth, with very brief papers which appear to be abstracts of talks. The book represents the proceedings of a conference on identification of suicide potential, held at Teachers College, Columbia University, New York, December, 1969. However, there are two appendices by Ari Kiev which are evidently prepared for education of the lay public: one is on information-giving as adjunct to treatment, and the other on the early recognition and treatment of potentially suicidal persons. These are well organized, detailed and simplified presentations with lists of do's and don'ts, and should be useful for the stated purpose.

The papers in the main part of the book take as a departure the observation that suicide rates in this country have not been appreciably lowered by the development and spread of suicide prevention centers. Surprisingly, few of the speakers conclude from this that suicide prevention activities or centers should be discontinued. Instead they recommend other moves, some of them innovative and some of them, in my opinion, of doubtful practicality and/or acceptability to the general public. For example, Ari Kiev, in a chapter on suicide prevention, recommends the aggressive seeking out of suicidal subjects by suicide prevention centers through measures such as door to door canvassing in areas with high rates of single-room occupancy, asking general practitioners and psychiatrists to refer high-risk patients to suicide prevention services, using house-bound people to man telephone services as volunteers, adding picture screens to the telephone to enrich communication, etc. He also recommends broadening the activities of suicide prevention centers to general crisis intervention activities. He also suggests better early recognition of psychiatric disorders and better integration of suicide prevention activities.

Ronald Maris contributes a chapter on social suicide in which he broadens the meaning of the term "suicide" to various destructive developments and practices in the larger society, including such things as urban crowding, depersonalization, economic exploitation, air and water pollution, etc.

There are then brief chapters on suicide among college students, suicide among black Americans, family determinants of suicide potential, suicide among alcoholics, low-risk suicidal callers, and finally chapters with titles like "Collected thoughts of a suicidologist" and "For whom the id tolls".

Although I think the topic is important and the title "Identifying Suicidal Potential" holds great promise, this book in no way lives up to its title. I found it a patchy collection of papers ranging from the serious to the trivial. The audience for which it is intended is unclear. It might be useful to volunteers who are to work in suicide prevention activities. Parts of it are directed at families. Although it is edited by two nurses, I cannot see that it has any specific application to the functions and responsibilities of nurses.

ALEX D. POKORNY, MD
Houston

IN THE TMA LIBRARY

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Personals

After serving four months as acting dean, DR. EDWARD N BRANDT, JR, has been named Dean of Medicine at The University of Texas Medical Branch at Galveston. Dr. Brandt came to UTMB from the University of Oklahoma Medical Center in 1969.

DR. DOR W BROWN, Fredericksburg eye, ear, nose, and throat physician, was recently presented the Distinguished Alumni Award from Southwestern University Alumni Association, Georgetown.

The Board of Trustees of the AMA has appointed DR. ROBERT L DONALD, Houston, as AMA delegate to the Commission on Emergency Medical Services.

The Texas Society of Pathologists installed DR. SIDNEY W KOWIERSCHKE, Bryan, president during its annual meeting in McAllen. Dr. Kowierschke is also an alternate delegate to the College of American Pathologists.

Corsicana physician, DR. LESTER E McGARY has been named a member of the Citizen's Advisory Council to the Joint Committee on Prison Reform. He was nominated for the position by State Sen Ron Clower of Garland.

DR. HENRY D McINTOSH, professor and chairman of medicine at Baylor College of Medicine, was installed president of the American College of Cardiology. Dr. McIntosh is also chairman-elect of the American Heart Association's Council of Clinical Cardiology.

Dallas physician, DR. FLOYD A NORMAN has been named Acting Regional Health Administrator for the Public Health Service in HEW's five-state Region VI. He will be responsible for all health activities and programs in Region VI.

Fort Worth pathologist, DR. O J WOLLENMAN, JR, was awarded the George T Caldwell Gold Medal by the Texas Society of Pathologists during their annual convention in McAllen.

"You will have to come in. We don't sell seed tapes."

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

W. B. Allen
Nacogdoches, 1913-1973

H. S. Aronson
Dallas, 1901-1973

W. E. Barry
Carthage, 1904-1973

J. W. David
Corsicana, 1893-1973

G. R. Davis
El Paso, 1919-1973

S. W. Hollis
Abilene, 1895-1973

R. E. Leslie
El Campo, 1913-1973

W. J. Poshataske
Silsbee, 1911-1973

J. D. Steed
Wichita Falls, 1920-1973

J. C. Turnham, Jr.
Alice, 1926-1973

J. R. Williams, Jr.
Garland, 1929-1973

T. L. Woodard
Dallas, 1894-1973

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

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Recent deaths

Dr. W B Allen
Nacogdoches family physician, Dr. Walter Barton Allen, died Oct 25 1973, following a long illness. He was 60 years old.
A graduate of Baylor University, Waco, Dr. Allen earned an MD degree from Baylor College of Medicine (then located in Dallas). He interned and completed a surgical residency at Shreveport Charity Hospital, Shreveport, La. Following military service from 1942 to 1946, Dr. Allen established his practice in Nacogdoches.
He was a member of Texas Medical Association, American Medical Association, and a past president of Nacogdoches County Medical Society. He had also served as Chief of Staff of Memorial Hospital in Nacogdoches.
He is survived by his wife, Virginia Danforth Allen, Nacogdoches; daughter, Miss Molly Allen; and two sons, Dr. M Danford Allen and Barton Allen; all of Dallas.

Dr. W E Barry
Carthage radiologist, Dr. William Earl Barry died Oct 30, 1973, at the age of 69. Cause of death was cancer of the lung.
Dr. Barry was graduated from Rush Medical College, Chicago, in 1933. Following an internship at Denver General Hospital, Denver, he entered the US Army as a career officer. In 1948 he completed a residency in radiology at the Brook Army Medical Center, Fort Sam Houston, Tex, and was certified by the American Board of Radiology. He retired from the service in 1960 and moved to Carthage where he established a radiology practice.
Dr. Barry was a member of American College of Radiology, Radiological Society of North America, Aerospace Medical Association, Panola County Medical Society, Texas Medical Association, and American Medical Association.
He is survived by his wife, Ruth Bishop Barry, Carthage; two sons, William E Barry, Jr, Moline, Ill, and Dr. Robert J Barry, Cedar Park, Iowa; and one sister, Mrs. Florence Macy, Hays, Kan.

Dr. Allen

Dr. R E Leslie
Dr. Robert Edison Leslie died Dec 7, 1973. Death was due to complications from a duodenal ulcer. The 60-year-old internist had practiced in El Campo since 1950.
He received a BS degree from the University of Missouri, Columbia, Mo, and an MD degree from Wayne State University School of Medicine, Detroit. Following an internship and residency at Henry Ford Hospital, Detroit, he was a teaching fellow at Johns Hopkins Hospital, Baltimore. He served in the US Navy in World War II. Following discharge from the service, Dr. Leslie moved to Wharton in 1947 to begin the practice of medicine. In 1950, he moved his office to El Campo where he remained until his death.
Dr. Leslie held memberships in American Medical Association, American Geriatrics Society, Southern Medical Association, American Heart Association, Texas Society of Internal Medicine, and Texas Medical Association. He had served as president of both Wharton-Jackson-Fort Bend-Matagorda County Medical Society and Texas Heart Association. He was a fellow, and served as governor, of American College of Cardiology, and was also a fellow of American College of Chest Physicians.
The physician is survived by his wife, Dorothy Kuehn Leslie, El Campo; three sons, Andrew E Leslie, Galveston, William

Dr. Leslie

Dr. Williams, Jr.

Dr. Poshataske

K Leslie, Paris, France, and James R Leslie, El Campo; one sister, Mrs. Maurice Griffin, Sedalia, Mo; and one brother, James Leslie, East Brunswick, NJ.

Dr. J R Williams, Jr

Dr. John Riley Williams, Jr, Garland radiologist, died Oct 21, 1973, at the age of 44. Cause of death was heart attack.

A native of Clifton, Tex, Dr. Williams earned an MD degree from The University of Texas Southwestern Medical School at Dallas. While serving in the US Navy, he completed an internship and residency in radiology at US Naval Hospital, New York. Following release from the service, he returned to Dallas where he took another residency in radiology at Parkland Memorial Hospital, Dallas. He opened a radiological practice in Garland in 1964, and remained there until his death.

Dr. Williams was a member of Radiological Society of North America, Society of Nuclear Medicine, Dallas County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his mother, Mrs. J R Williams, Sr; daughter, Julia, and son, Worth Riley Williams, all of Dallas.

Dr. W J Poshataske

Dr. Wallace J Poshataske, 62-year-old family physician in Silsbee, died Nov 16, 1973, after a lengthy illness.

In 1936, Dr. Poshataske was graduated with an MD degree from Chicago Medical School in Chicago. He served an internship in Beaumont at St Therese Hospital and residencies in surgery at Ashland State Hospital, Ashland, Pa, and at Torbett Clinic and Hospital, Marlin. After doing postgraduate work at Cook County Hospital, Chicago, he was certified by the American Academy of Family Physicians. He then moved to Silsbee and was in practice there from 1939 until his illness.

A past president, secretary, and delegate from Hardin-Tyler County Medical Society, Dr. Poshataske was a member of Texas Medical Association, American Medical Association, American Society of Abdominal Surgeons, Southern Medical Association, American Academy of Family Physicians, Texas Academy of Family Physicians, American Association of Railway Surgeons, Industrial Medical Association, and American Trudeau Society. He also served as vice-president and secretary-treasurer of Tenth District Medical Society.

Dr. Poshataske is survived by his wife, Eloise Schuler Poshataske, Silsbee; two daughters, Mrs. Annelle Waguespack, and Jean Poshataske, both of Baton Rouge, La; a brother, Edward Poshataske, and a sister, Mrs. Wanda Swirk, both of Fort Lauderdale, Fla.

Dr. J W David

Dr. John Wilson David, long-time Corsicana family physician and internist, died Dec 19, 1973, at the age of 80 years.

A graduate of Southwestern University at Georgetown, Dr. David earned an MD degree from The University of Texas Medical Branch at Galveston. He completed an internship at John Sealy Hospital, Galveston, and was adjunct professor of physiology at The University of Texas Medical Branch at Galveston for one year. He also did postgraduate work at Harvard Medical School, Boston. He established his practice in Corsicana in 1922, and was co-founder of

the Navarro Clinic in Corsicana. He retired in 1972.
Honorary member of Texas Medical Association, Dr. David also held memberships in American Medical Association and Texas Radiological Society. He also served as both president and secretary of Navarro County Medical Society.
He is survived by two daughters, Miss Dorothy David, Corsicana, and Mrs. Frances Look, Fort Worth; brother, Lewis David, College Station; sister, Mrs. Kathleen Stell, Corsicana; and two grandchildren.

Dr. J D Steed

Dr. Joe Dean Steed died Dec 5, 1973, in a Wichita Falls hospital at the age of 53. The radiologist had practiced in Wichita Falls for over 20 years.
Dr. Steed received a BS degree from The University of Texas at Austin and earned an MD degree from The University of Texas Medical Branch at Galveston. He completed an internship at Wichita Falls Clinic-Hospital and residencies at Wichita Falls Clinic-Hospital, Wichita Falls, and Veterans Administration Center, Wadsworth, Kan. He then returned to Wichita Falls for the practice of radiology.
He was a member of American College of Radiology, Radiological Society of North America, Society of Nuclear Medicine, Wichita County Medical Society, Texas Medical Association, and American Medical Association, and was certified by the American Board of Radiology.
The physician is survived by his wife, Sealy Ann Haglund Steed, Wichita Falls; two sons, Christian Allison Steed, New Orleans, and Jefferson Terry Steed, Wichita Falls; and one daughter, Mrs. David A. (Deborah) Finholt, Minneapolis.

Dr. S W Hollis

Dr. Scott Wingo Hollis, Abilene family physician, died Dec 4, 1973, following a stroke in November.
A 1918 graduate of Baylor College of Medicine, then located in Dallas, he was the youngest graduate in Baylor's history at that time. On completion of his schooling, Dr. Hollis served as an officer in the US Marines during World War I. After discharge from the service, he returned to Abilene to join his father and brother in surgical practice. Dr. Hollis also served many years as city-county health officer in Abilene.
Dr. Hollis was a member of Taylor Jones County Medical Society, Texas Medical Association, and American Medical Association, and was a charter member of the staff of Hendrick Memorial Hospital, Abilene.
He is survived by his wife, Geraldine Brooks Hollis, Abilene; one sister, Mrs. Marvin House, Dimmitt; and two nieces.

Dr. Steed

Dr. Hollis

Dr. H S Aronson

Long-time Dallas physician, Dr. Howard Stanley Aronson died Dec 31, 1973. He was 72 years old.
Dr. Aronson received an MD degree from The University of Texas Medical Branch at Galveston in 1926. He completed an internship at St Paul Hospital, Dallas, and did postgraduate study at the University of Vienna, Austria. He also served as superintendent of Emergency Hospital of Dallas prior to beginning private practice in 1930. Dr. Aronson was still active in his practice at the time of his death.
Dr. Aronson was a member of Dallas County Medical Society, Texas Medical Association, American Medical Association, and American Geriatrics Society.

Dr. Davis

He is survived by his wife, Frances Cabell Aronson; and two daughters, Frances and Emilie Aronson; all of Dallas.

Dr. G R Davis

El Paso family physician, Dr. George Richard Davis died Dec 5, 1973, at the age of 54. He had lived in El Paso for the past 20 years.

Dr. Davis was graduated from the University of Minnesota Medical School, Minneapolis, with an MD degree in 1943. He served an internship at Ancker Hospital, St Paul, Minn, and residencies at the University of Minnesota Affiliated Hospitals in Minneapolis, and at Methodist Hospital and Parkland Memorial Hospital in Dallas. He later served as a captain in the US Army. Before moving to El Paso in 1953, Dr. Davis practiced medicine in Illinois.

A member of El Paso County Medical Society, Dr. Davis also belonged to Texas Medical Association, Illinois State Medical Society, and the American Medical Association, as well as Alpha Omega Alpha Honorary Fraternity.

Surviving Dr. Davis are his wife, Helen Heberlee Davis, El Paso; three sons, Charles Davis, Victoria, George Davis and John Thomas Davis, both of El Paso; a daughter, Beverly Davis, Houston; and his mother, Mrs. Mollie E Davis, El Paso.

Dr. T L Woodard

Member of the Texas Medical Association for 50 years, Dr. Thad Leroy Woodard died Oct 30, 1973, in Dallas. The 79-year-old family physician had practiced medicine in Dallas since 1923.

Dr. Woodard received a BA degree from The University of Texas at Austin and an MD degree from The University of Texas Medical Branch at Galveston. Following an internship at St Paul Hospital, Dallas, he established his practice in Dallas, and remained in active practice until his retirement in 1971.

Dr. Woodard was a fellow of American Academy of Family Physicians and a member of Dallas County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Ida Grimmer Woodard, Dallas; two sons, Dr. William C Woodard, Dallas, and T Leroy Woodard, Jr, Tennessee; and nine grandchildren.

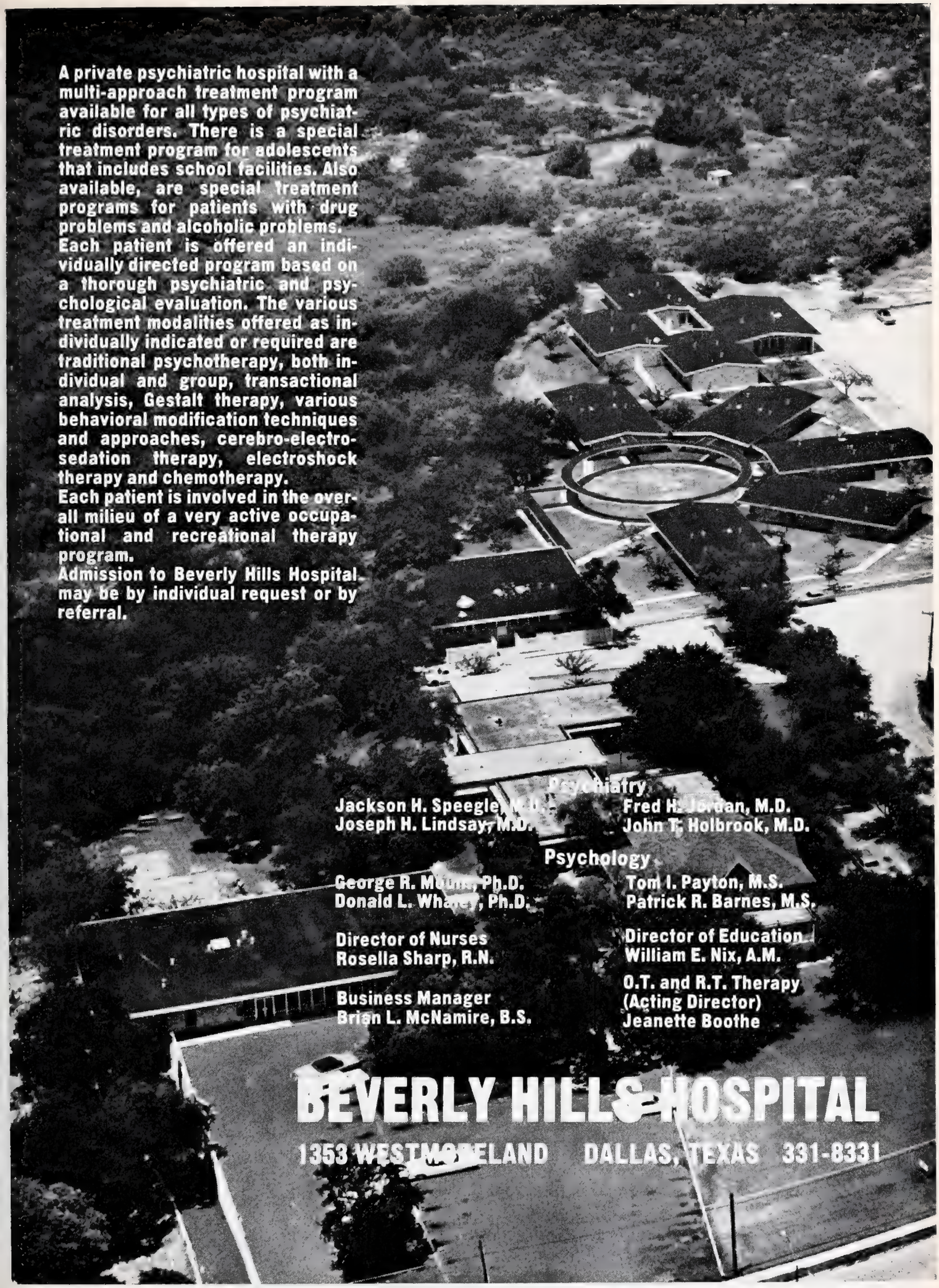
Dr. J C Turnham, Jr

Dr. John C Turnham, Jr, Alice surgeon, died Oct 6, 1973, in a Corpus Christi hospital following a short illness. He was 47 years old.

Dr. Turnham received an MD degree from Tulane University School of Medicine, New Orleans. Following an internship and residency at Charity Hospital, New Orleans, Dr. Turnham moved to Alice in 1957.

He was named a Fellow of American College of Surgeons and was certified by the American Board of Surgery. Dr. Turnham also held memberships in Brooks-Duval-Jim Wells County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Huberta Sain Turnham; one son, John H Turnham; two daughters, Mary Barbara and Jane Elizabeth, all of Alice; his parents, Mr. and Mrs. John Turnham, Pearsall; and one brother.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Each patient is offered an individually directed program based on a thorough psychiatric and psychological evaluation. The various treatment modalities offered as individually indicated or required are traditional psychotherapy, both individual and group, transactional analysis, Gestalt therapy, various behavioral modification techniques and approaches, cerebro-electrosedation therapy, electroshock therapy and chemotherapy.
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A Comprehensive Therapeutic Program for the G.I. patient

Enarax® (oxyphencyclimine HCl/hydroxyzine HCl) Tablets, as adjunctive therapy, can help relieve a wide range of gastrointestinal disorders—and their accompanying anxiety.* Without cooperation of the patient, however, no medicinal regimen can succeed entirely... an understanding of the condition, the factors involved in its development, and the proper approach to self-care are often basic to successful therapy.

To help save some of your valuable time in providing this background information, this specially designed G.I. Patient Relief Kit is available on request—a valuable addition to your overall therapeutic program.

In addition to a complimentary introductory prescription for **Enarax** Tablets, this handsome kit contains the information and appropriate stimuli to start the patient on a program of proper self-care:

Patient Information Booklet, "You and Your Digestive System"—easy-to-swallow advice on how to take care of the gastrointestinal tract, including diet information.

Sanka® **Decaffeinated Coffee** sample packets to provide an alternative to regular coffee with caffeine.

Gelusil® **Liquid** to help relieve heartburn, dyspepsia, gas, and flatulence between meals.

Money-saving coupon for future purchase.

You can obtain a quantity of these kits packaged for easy office storage by filling out the attached Prepaid Business Reply Card.

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*Based on a review of this drug by the National Academy of Sciences—National Research Council, F.D.A. has classified this indication as "possibly" effective.

Please see following page for prescribing information, including adverse reactions, contraindications and warnings.

A Comprehensive Therapeutic Program for the G.I. patient

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New York, New York 10017

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Please send me six G.I. Patient Relief Kits complete with complimentary prescription forms for an introductory supply of

Enarax® tablets
(oxyphencyclimine HCl/hydroxyzine HCl)

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ME#_____

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Physician's Signature

To help control G.I. distress/calm psychic tension*

Enarax® tablets

(oxyphencyclimine HCl/hydroxyzine HCl)

- Combination provides for effective 12-hours antispasmodic/anticholinergic action of oxyphencyclimine with the calming action of Atarax® (hydroxyzine HCl).
- As adjunctive therapy, helps relieve a wide range of gastrointestinal disorders, and their accompanying anxiety—simultaneously. However, it should be used with caution in patients with ulcerative colitis.
- Avoids the confusion and expense of two medication schedules.
- Convenient b.i.d. dosage.
- Individualized therapy—Enarax® 5 (oxyphencyclimine HCl 5 mg./hydroxyzine HCl 25 mg.). Enarax® 10 (oxyphencyclimine HCl 10 mg./hydroxyzine HCl 25 mg.).
- Usually well tolerated; drowsiness or blurred vision may occur.

More detailed professional information available on request.

SEE REVERSE FOR FREE OFFER.

Composition

Each Enarax 5 tablet contains:

oxyphencyclimine HCl ..... 5 mg.

hydroxyzine HCl N.F. (Atarax)® .25 mg.

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Enarax may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery, or perform hazardous work while taking this drug.

Precautions. Anticholinergics should be used with caution in patients with:

autonomic neuropathy,

hepatic or renal disease,

ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon.

hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension and nonobstructing prostatic hypertrophy; hiatal hernia associated with reflux esophagitis, since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis).

The use of this drug in the presence of complication of biliary tract disease should not be relied upon.

Tachycardia should be thoroughly investigated before giving anticholinergic (atropine-like) drugs since they may increase the heart rate.

With overdosage, a curare-like action may occur.

Adverse Reactions. As with other anticholinergics, oxyphencyclimine HCl produces certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these.

Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis, dilatation of the pupil; cycloplegia, increased ocular tension; loss of taste; headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestation; some degree of mental confusion and/or excitement especially in elderly persons.

Decreased sweating is another adverse reaction that may occur. It should be noted that adrenergic innervation of the eccrine sweat glands on the palms and soles make complete control of sweating impossible. An end point of complete anhidrosis cannot occur because large doses of drug would be required, and this would produce severe side effects from parasympathetic paralysis.

Side effects which occasionally occur with hydroxyzine HCl (Atarax)® are drowsiness, xerostomia, and, at extremely high doses, involuntary motor activity, all of which may be controlled by reduction of the dosage or discontinuation of the medication.

Dosage and Administration. The recommended adult dose is usually one Enarax 5 or one Enarax 10 tablet two times a day or three times a day, depending on individual response. Proper diet and antacids should be used where indicated as concomitant therapy. The safe use of Enarax in children has not been established; therefore, the drug should not be used in children.

Drug Interactions. The potentiating action of hydroxyzine must be considered when the drug is used in combination with central nervous system depressants.

How Supplied. Enarax 5 is available as white scored tablets in bottles of 60. Enarax 10 is available as black and white scored tablets in bottles of 60.

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To help control G.I. distress/calm psychic tension*

Enarax® tablets

(oxyphencyclimine HCl/hydroxyzine HCl)

- Combination provides for effective 12-hours antispasmodic/anticholinergic action of oxyphencyclimine with the calming action of Atarax® (hydroxyzine HCl).
- As adjunctive therapy, helps relieve a wide range of gastrointestinal disorders, and their accompanying anxiety—simultaneously. However, it should be used with caution in patients with ulcerative colitis.
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More detailed professional information available on request.

SEE REVERSE FOR FREE OFFER.

Composition

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oxyphencyclimine HCl ..... 5 mg.
hydroxyzine HCl N.F. (Atarax)® ..... 25 mg.
Each Enarax 10 tablet contains:
oxyphencyclimine HCl ..... 10 mg.
hydroxyzine HCl N.F. (Atarax)® ..... 25 mg.

Description. Enarax is a combination of oxyphencyclimine HCl and hydroxyzine HCl. Oxyphencyclimine HCl is a crystalline substance characterized by the chemical formula: (1-methyl-1,4,5,6 tetrahydro-2-pyrimidyl-methyl alpha-cyclohexyl-alpha-phenylglycolate hydrochloride). It is soluble and stable in aqueous solutions.

Hydroxyzine HCl is designated chemically as 1-(p-chlorobenzhydryl)-4-[2-(2-hydroxyethoxy)-ethyl] piperazine dihydrochloride.

Actions. Oxyphencyclimine HCl provides long acting suppression of gastric secretion through its anticholinergic action. The mechanism of this action is the inhibition of acetylcholine at postganglionic cholinergic sites in structures innervated by postganglionic parasympathetic nerves and on smooth muscle not so innervated but responsive to acetylcholine.

Hydroxyzine HCl, marketed under the trade name, Atarax®, has been shown clinically to be an effective anti-anxiety agent. It induces a calming effect in anxious, tense individuals without impairing mental alertness. It is not a cortical depressant, but its action may be due to a suppression of activity on certain key regions of the subcortical area of the central nervous system.

***Indications.** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Possibly Effective: As adjunctive therapy in peptic ulcer; irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, functional gastrointestinal disorders); functional diarrhea; drug induced diarrhea; ulcerative colitis, and urinary bladder spasm and ureteral spasm (i.e. smooth muscle spasm).

Final classification of these less than effective indications requires further investigation.

Contraindications. Because of its anticholinergic activity, Enarax is contraindicated in the presence of glaucoma, obstructive uropathy (i.e. bladder neck obstruction due to prostatic hypertrophy), obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis, etc.); paralytic ileus; intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis.

Warnings. Hydroxyzine, when administered to the pregnant mouse, rat, and rabbit induced fetal abnormalities in the rat at doses substantially above the human therapeutic range. Clinical data in human beings are inadequate to establish safety in early pregnancy. Until such data are available, hydroxyzine-containing drugs are not advised in early pregnancy.

In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heatstroke due to decreased sweating).

Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful.

Enarax may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery, or perform hazardous work while taking this drug.

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hepatic or renal disease,
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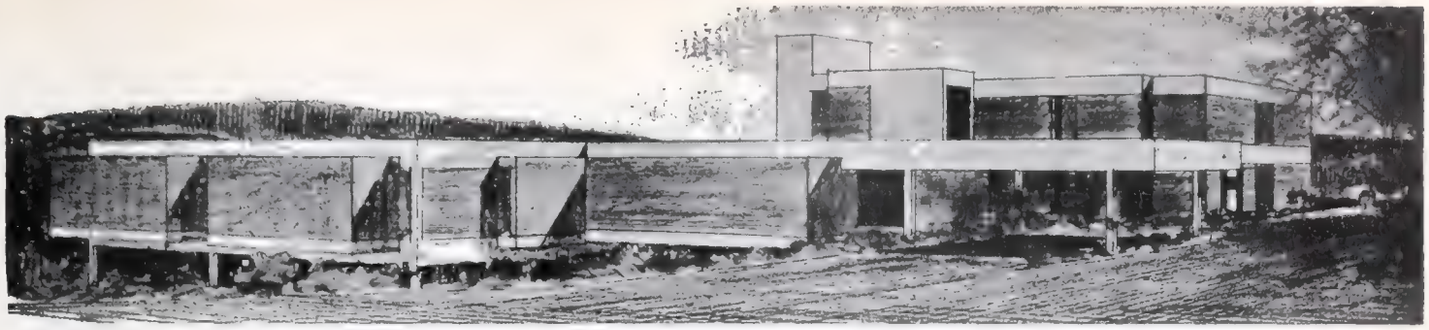

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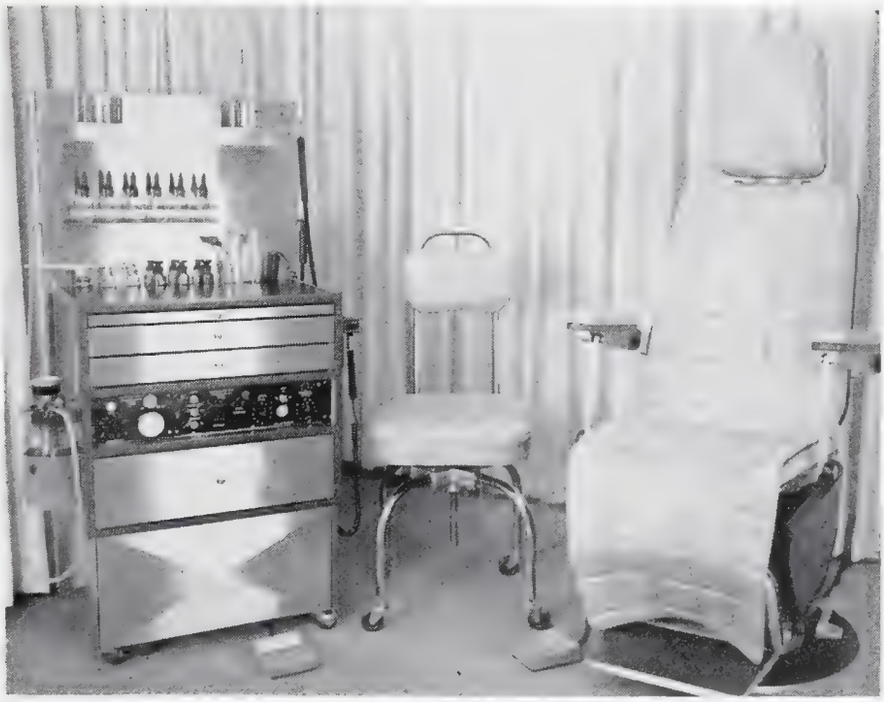

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What's on your patient's face...

may be more important than his chief complaint

Patient P.T.* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electrosurgical procedures.

Patient P.T.* seen on 6/12/67, seven weeks after discontinuation of 5% FU cream. Reaction has subsided. Residual scarring not seen except that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.

*Data on file, Hoffmann-La Roche Inc., Nutley, N.J

The lesions on his face are solar/actinic— so-called "senile" keratoses... and they may be premalignant.

Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics. The typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.

Sequence of therapy— selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; this reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

Acceptable results

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

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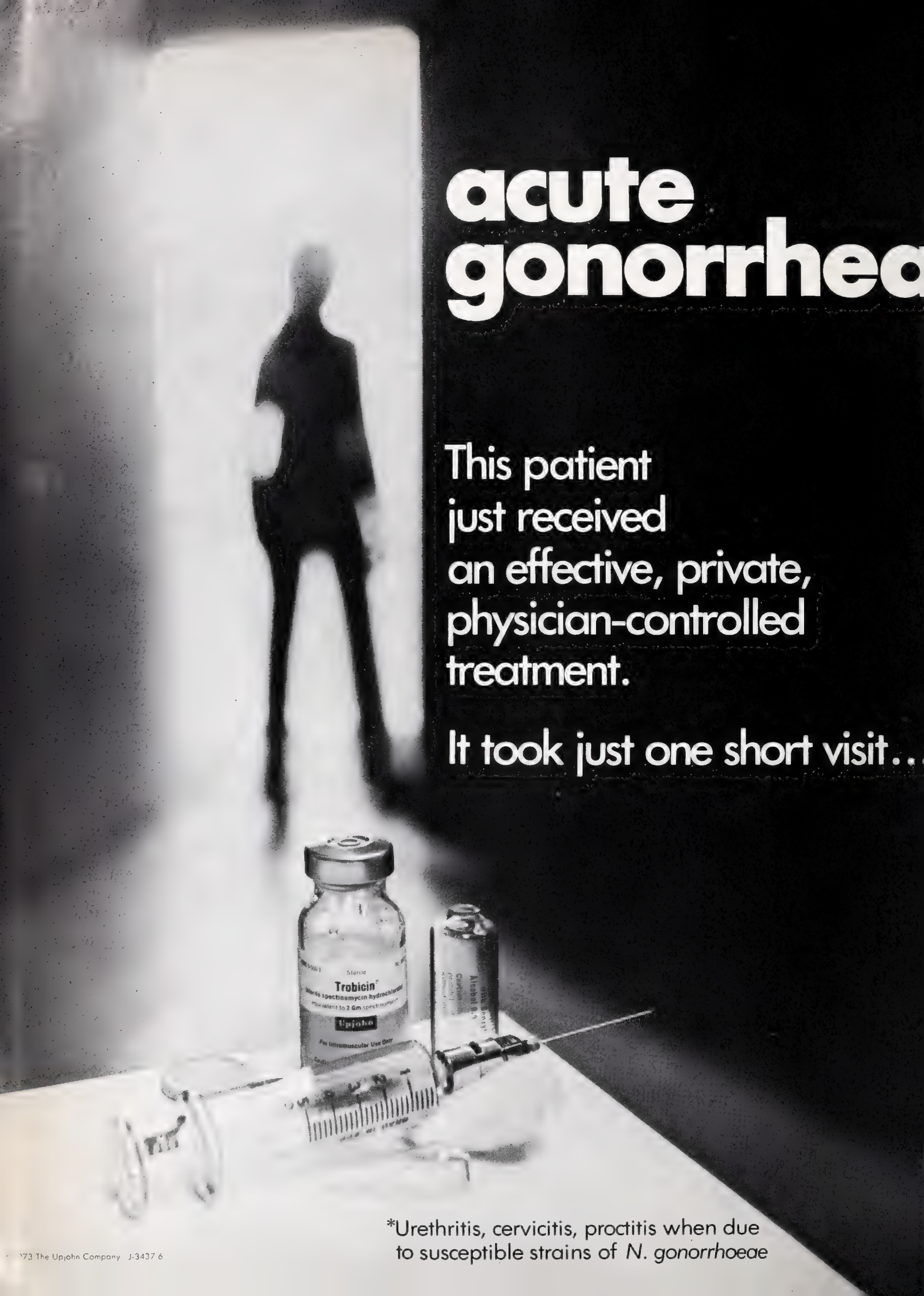
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Warnings: Not indicated for the treatment of syphilis. Antibiotics used to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Patients should be carefully examined and monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected.
Safety for use in infants, children and pregnant women has not been established.

Precautions: The usual precautions should be observed with atopic individuals.
Clinical effectiveness should be monitored to detect evidence of development of resistance by *N. gonorrhoeae*.

Adverse reactions: The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.
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Dosage and administration: Keep at 25° C and use within 24 hours after reconstitution with diluent.

Male—Inject 5 ml intramuscularly for a 2 gram dose. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.
Female—Inject 10 ml intramuscularly for a 4 gram dose.

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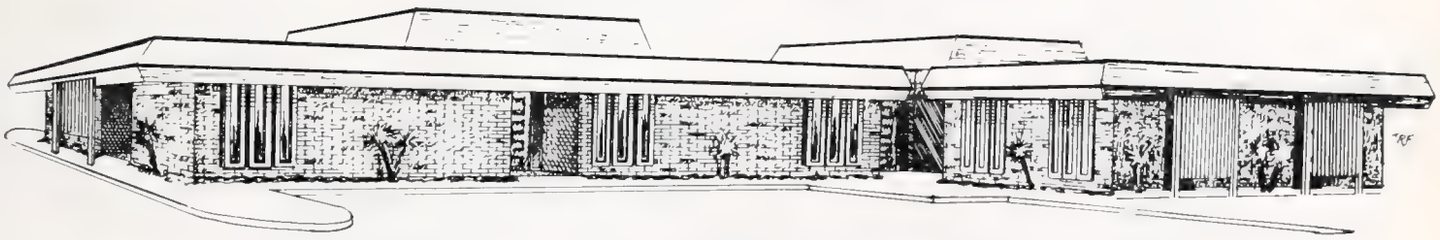

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GENERAL PRACTITIONER: Excellent location in the Lost Pines of Texas area. Growing community of 3,500 along the beautiful Colorado river has an excellent opportunity for a good family general practitioner. Excellent small hospital (25 beds) and nursing home (62 beds) complex. Guaranteed salary, clinic environment and other fringe benefits will make this difficult to turn down if interested in working in a progressive rural community. Write Ad-386, *Texas Medicine*, 1801 North Lamar Boulevard, Austin, Texas 78701.

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FAMILY PRACTICE PHYSICIAN NEEDED to join a three man group doing general practice. New community hospital and new clinic building under construction now, modern golf course, large lake, excellent hunting, excellent schools with no busing and no integration problems. 90 minutes from Dallas-Fort Worth. No investment necessary. Salary first year negotiable, with partnership after one or two years if desired. Contact K. J. Wharram, M. D. or A. D. Major, M.D., Nocona, Texas 76255. AC 817-825-3371.

FAMILY PRACTICE, with two other physicians. 50 bed hospital adjacent to clinic. Two nursing homes located in town. Large patient drawing area, good fishing, hunting, 8 miles to Lake Whitney, excellent schools, churches, and progressive small town. Guaranteed salary until established, partnership available in future. Contact Morris R. Hill, M. D. or James G. Barton, M. D. at Barton & Hill Medical Association, P. O. Box 546, Whitney, Texas 76692; phone AC817-694-2221.

WANTED: GENERAL PRACTITIONER OR INTERNIST on staff of San Angelo Center. This is an institution for the moderately mentally retarded of the state. Salaries are quite competitive with other state and federal institutions. 40 hour work week, ample vacation time, and other fringe benefits. Excellent community to live, near San Angelo, Texas. Contact Medical Director, San Angelo Center, Carlsbad, Texas 76934.

FAMILY PHYSICIAN: This is an opportunity you should look into. Three family practice physicians need fourth man. No capital outlay, equal privileges, no buy-in, guarantee until established, set your own pace. Clinic, 40-bed hospital, 44-bed extended care, accredited by JCAH. Contact Ray W. Freeman, M.D., Chief of Staff, or Gordon Russell, Administrator, Hi-Plains Hospital-Clinic, 293 West 4th, Hale Center, Texas 79041. Call 806, 839-2471.

NEEDED—INTERNIST TO ASSOCIATE with three busy GP's in Central Texas university town. No internist in area. Should be nice place to live and work. Please reply to Ad-457, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

THREE PHYSICIANS NEEDED. FAMILY PRACTICE PHYSICIAN, INTERNIST AND SURGEON needed to join a full time, five man clinic association group with part time radiologist and clinical pathologist in Clifton, Texas. Located in the heart of Texas, 35 miles NW of Waco, 15 miles from Lake Whitney. Good fishing, excellent hunting, new, recently completed, modern golf course. Excellent schools, churches and growing progressive small town. Closely associated with new 65-bed hospital facility, which is fully accredited by the Joint Commission. Suggest salary at first with partnership in future. Financial terms open. Please contact V. D. Goodall, M.D., Clifton Medical and Surgical Clinic Association, Clifton, Texas 76634. Telephone 675-8621 or 675-3113.

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FAMILY PHYSICIAN OR GENERAL INTERNIST for group practice in attractive Central Texas town. Must have boards or be board eligible, under 35. Complete group will consist of 3 older GPs and 4 board certified younger men. Write O. W. Lowrey, M.D., Lowrey Clinic, Gatesville, Texas 76528, or phone collect AC817-865-2266.

FAMILY PRACTICE, with two other family practitioners. Two hospitals with 550 beds within fifteen minute, 4 lane drive. Progressive Central Texas community of 4,350 population. Community void of problems of large cities. 15 miles to Waco (pop. 102,000); 100 miles to Dallas, Fort Worth, and Austin. Good schools (no bussing), churches, country club with 18 hole golf course, three nearby lakes, recreational facilities. An excellent place to raise a family. New associate would be on salary first year; partnership in association later. Exchange calls and weekends with two other physicians. Contact R. Dean Elliott, Administrator, 414 Johnson Drive, McGregor, Texas 76657. AC817-840-3281.

PHYSICIANS NEEDED—Staff physicians, general practitioners and/or board certified specialists to increase staff of Travis State School. Fringe benefits include 40-hour work week, vacation and sick leave. Present and projected salary increases make positions attractive. Texas license required. Contact Superintendent or Medical Director, Travis State School, P. O. Box 430, Austin, Texas 78767. Phone AC512-926-2410. An equal opportunity employer.

URGENTLY NEEDED, BOARD CERTIFIED OR ELIGIBLE INTERNIST OR GENERAL PRACTITIONER for staff physician on medical service and a rehabilitation medicine physician in a 346-bed GM&S hospital located in the beautiful Texas Hill Country only 65 miles from San Antonio. Starting salary determined by training and experience. Excellent vacation and sick leave benefits, insurance, retirement and other fringe benefits. Please write or call Chief of Staff, VA Hospital, Kerrville, Texas 78028, telephone number 512-896-2020, Ext. 112. An equal opportunity employer.

WANTED: PHYSICIAN TO JOIN GENERAL SURGEON AND GENERAL PRACTITIONER in small town. Privately owned clinic and hospital combination. Guaranteed salary. Prefer family practice specialist. For additional information, please contact M. A. Childress, M.D., P.O. Box 289, Goldthwaite, Texas 76844; Phone 915-648-2212.

PSYCHIATRIST WANTED: Board certified or eligible, bilingual (Spanish & English) psychiatrist interested in day care concept to join the staff of the El Paso Psychiatric Clinic. Apply Director, El Paso Psychiatric Clinic, 2616 North Oregon, El Paso, Texas 79902.

GENERAL PRACTITIONER AND INTERNIST. Newly constructed multi-specialty 6-man clinic in West Texas city of 150,000. New 120 bed accredited hospital adjacent to clinic. Top salary with partnership opportunity in two years. Interested applicants send curriculum vitae to AD-483, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ALLERGIST—Board certified or eligible. Join growing solo practice North Central Texas. Salary, then full partnership association. 120,000 population, 300,000 drawing area. Excellent hospital facilities. Ideal family living. Send curriculum vitae with reply please. Hermann Gregory, M.D., 1310 Ninth Street, Wichita Falls, Texas 76301. 817-322-6926.

OCCUPATIONAL MEDICINE—Primary care physicians, board qualified in internal medicine, occupational, preventive or aviation medicine, for primary care practice in large multi-specialty clinic. Texas Gulf Coast area, with numerous company accounts and university affiliation. Branch offices and proposed prepay health program and government contracts (no dual compensation involved for retired). Urgent. Write or call J. A. Bakken, Administrator, Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025. Phone 713-526-2671.

WANTED: FAMILY PHYSICIAN desiring full range of general practice to associate with three man family practice group. Will guarantee minimum and after established, will offer partnership. For more information, please contact University Park Clinic, Box 4109, Wichita Falls, Texas 76308 or call 817-692-2024 for Drs. Deets, Burross, or Dean.

STAFF PHYSICIAN NEEDED for state hospital. Progressive 1,000 resident state institution. Eligibility for Texas licenses required. 40-hour work week, paid vacation, sick leave, holidays, good retirement plan, free group insurance. Kerrville is known as a retirement center. Prefer mature physician over age 50. Please contact Luther W. Ross, M.D., Superintendent, Kerrville State Hospital, P.O. Box 1468, Kerrville, Texas 78028 or phone 512-896-2211.

INTERNIST with subspecialty in either pulmonary disease or gastroenterology to associate with multi-specialty clinic, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

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RADIOLOGIST to associate with multi-specialty clinic, soon to be in new hospital with all new equipment; fringe benefits, good climate, good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

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PATHOLOGIST to associate with multi-specialty clinic soon to be in new hospital with all new equipment; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

FAMILY PRACTITIONER ASSOCIATE SOUGHT by three family practitioners in expanding population and recreational area with new 22 bed community hospital 30 miles from Austin. Also near enough to San Antonio and Houston to enjoy cultural and post graduate opportunities. Very good earnings from beginning; no buy-in required. Please reply to Bastrop Clinic, 1109 Church Street, Bastrop, Texas 78602. Phone AC512-321-2541.

WANTED: A PHYSICIAN FOR GENERAL PRACTICE in Poteet, Texas. Area population over 8,000; 20 miles south of San Antonio, Texas. Newly equipped $125,000 medical clinic available at very low rates. Equipped with x-ray; offices for two medical doctors; waiting room equipped. Contact A. Hollub, Poteet, Texas; Phone 626-2861.

UNUSUAL OPPORTUNITIES—INTERNISTS, with or without subspecialty interest. Excellent starting salary; fringe benefits include thirty days vacation, thirty days study time. Fort Worth-Dallas metroplex. Age no factor. Expanding private clinic. Call collect, 817-332-8305 or write Ad-490, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN NEEDED in a small Hill Country city in Texas. Existing equipped clinic or new facility available. No physician within a forty mile radius. Excellent opportunity for a energetic physician willing to work in a small community. Call collect: Jack Buchanan 512-232-5224 or P.O. Box 699, Leakey, Texas 78873.

INTERNIST TO JOIN BUSY GROWING PRIVATE PRACTICE. Located in town of 18,000 on western edge of Dallas-Fort Worth Metroplex, working with two general practitioners who are in early 40s and well established. Superb, full diagnostic equipment and facilities. Enjoyable and satisfying environment. Future partnership anticipated; beginning arrangements, mutually acceptable basis, dependent upon personal and professional qualifications. Write Ad-499, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

TEXAS, EL PASO: WANTED: Full time emergency department physicians needed at 436 bed modern hospital in El Paso. Attractive income assured on salary and/or percentage contract. Write to Administrator, Providence Memorial Hospital, El Paso, Texas 79902.

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PHYSICIAN NEEDED in Carrizo Springs, Texas. Office space available in Dimmit County Medical Center, adjacent to 30 bed hospital and 60 bed nursing home. Call C. W. Vandervoort at 512-876-2550.

OB-GYN, BOARD CERTIFIED OR ELIGIBLE, needed to join one other Ob-Gyn in multi-specialty group in Houston. Prefer someone fully trained, including laparoscopy. Salary leading to partnership. Good opportunity. Contact Business Manager, Glen Valley Clinic, 7630 Bellfort, Houston, Texas 77017.

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INTERNIST TO ASSOCIATE with two well established internists. City of 100,000 with three four-year colleges, many cultural activities, excellent hospitals, compatible medical colleagues, drawing area of 300,000. Can be busy from start. L. G. Hardwicke, M.D., 598 Westwood, Abilene, Texas 79603. Telephone 915-677-6227.

TEXAS, SAN ANTONIO: EMERGENCY PHYSICIANS NEEDED for new group serving three hospitals; 65,000 ER visits a year. Fee-for-service. Departmental status. Past earning history $45,000 plus additional income for optional participation in employee health service. Write or call George Pruett, M.D., 5239 Round Table, San Antonio, Texas 78218. Telephone 512-653-3612.

GENERAL PRACTITIONER TO JOIN BUSY GROWING PRACTICE. Located in town of 18,000 on western edge of Dallas-Fort Worth Metroplex, working with two general practitioners who are in early 40s and well established. Superb, full diagnostic equipment and facilities. Enjoyable and satisfying environment. Future partnership anticipated; beginning arrangements, mutually acceptable basis, dependent upon personal and professional qualifications. Write AD-500, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: INTERNIST WITH INTEREST IN CARDIOLOGY who desires to locate in rural area with leisure office hours and not particular about large earnings to associate with two AAFP physicians. Easy access to Houston, Austin, San Antonio and Texas Gulf Coast. Three ophthalmologists, one ENT physician in community. New hospital in planning stage. Salary to start, leading to partnership. Contact Ad-501, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic adjacent to 36 bed hospital recently remodeled. Salary open, partnership available after trial period. Contact Ad-503, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIANS: Private practice (solo, partnership, groups) opportunities exist in several communities within the state of Texas. (Arlington, Grand Prairie, Levelland, Pasadena, Victoria) As a public service to these communities, we are performing a free, no obligation, service acting as a liaison between physicians interested in practice opportunities and communities in need of their services. These communities have modern, JCAH approved hospitals, modern offices, and recognized needs for additional physicians. For details call collect 615-327-9551 or write with CV to: E. J. Ryan, Jr., Corporate Director, Medical Relations, Hospital Corporation of America, One Park Plaza, Nashville, Tennessee 37203.

Situations Wanted

OPHTHALMOLOGIST, 33, board eligible, university trained, military completed, married, completing retina fellowship in June 1974. Seeking association, partnership, or group but will consider all opportunities. Please reply to Ad-477, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST, trained in general radiology available July 1974. Completing residency now, passed written board 1973, eligible for oral board 1974; born 1928 in Czechoslovakia, graduated in Prague. Married, having Texas and Maryland license. Contact Marian G. Vlasak, M.D., 3629 Legendary Lane, Dallas, Texas 75224.

BOARD CERTIFIED RADIOLOGIST SEEKING a position for employment or practice in Texas. Has an active Texas medical license, and recently left Air Force after 10 years as a physician. He will send curriculum vitae, photograph and respond to inquiries on request. Please contact at the following address: James F. Wunder, M.D., Box 56, Bison, S. Dakota 57620; Phone 605-244-5684.

TWO BOARD CERTIFIED PEDIATRICIANS, a husband and wife, are looking for positions in Texas. Houston is preferable. One has subspecialty in pediatric infectious disease and the other has subspecialty in pediatric endocrinology. Both have passed FLEX exam and applied for Texas state board by reciprocity. Please contact Jalil Zarrabi, M.D., 18101 Lorain Avenue, Cleveland, Ohio 44111.

PATHOLOGIST: Age 32, university training in anatomical and clinical pathology will be completed in July. Military service completed. Seeks position in medium sized hospital or group. Please reply to Ad-491, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BILINGUAL (SPANISH-ENGLISH) 29 years of age, single, female, board eligible, will complete 3rd year in OB/Gyn, July 1974 at University County Hospital. Experienced fetal monitoring, suction curettage, ultra sound, laparoscopy, colposcopy, high risk pregnancy. Seeking group practice with a composite of office, surgical, gynecology and clinical obstetrics. Please reply to Ad-492, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OSTEOPATHIC PHYSICIAN, age 29, with two years experience in emergency and general medicine, seeks opportunity for relocation in group family practice or emergency room position in large community of Central or western Texas. Please reply to Robert E. Stedman, D.O., 318 Justice Drive, Carney's Point, New Jersey 08069.

PEDIATRICIAN, 36, board certified, two years of pediatric cardiology. At the present with US Army, would like to start practice in general pediatrics; interested in solo or associate. Desire relocation in San Antonio or Houston metropolitan areas; will consider other opportunities in East Texas. Bilingual Spanish. Available August 1974. Please reply to Ad-494, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST—34, board certified, diagnostic radiology. Four years experience university and private practice. University trained in all phases including special procedures, nuclear medicine. Presently in 80% practice, 20% teaching situation. Will consider all positions and all areas in Southwest. Near immediate availability. Please reply to Ad-495, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FULLY LICENSED PHYSICIAN in resident training program would like additional responsibilities involving night or week-end coverage in family practice situation within 60 mile radius of Austin. Please reply to Ad-497, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, board eligible, married, desires to relocate in small town with good hospital. Good references, available anytime. Have Texas license. Please reply to Ad-498, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

AVAILABLE NOW. Born 1925, graduated 1951, 15 years general practice abroad, ECFMG, one year internship in Dallas; Texas Board; interested in general practice in Dallas area only. Contact Ludmila Krulich, M.D., 6306 Prestonshire, Dallas, Texas 75225.

For Sale or For Rent

FOR SALE—LABORATORY EQUIPMENT practically complete set-up for small lab. List of items available on request. Includes Coleman Jr. Spectophotometer water bath, timers, reagent, glassware, instructions. Able to perform CBC, uniralysis, pro-time, RPR card, VDRL slide, pg and mono tests, etc. — $590.00. Contact Carroll E. Murtha, M.D., 3333 So. 11th, Abilene, Texas 79605. AC915-672-4071.

FOR SALE: Deceased physician's fully equipped office for general practice in small southeast Texas city, population 9,000, county population 29,000; 20 minutes from Beaumont, Texas; near fishing recreation area; light industry; modern doctors hospital; modern convalescent center. Contact Mrs. W. J. Poshataske, John H. Hartman Road, Silsbee, Texas 77656 (AC713-385-2696).

WELL ESTABLISHED 23 year practice of deceased internist, excellent staff, terms on equipment and furnishings, well planned rented office in professional center. Gulf coast town of 12,000, one hour from Houston. Hunting, fishing, golf, tennis, boating, etc. Rapidly growing area with need for physicians. Contact Mrs. Robert E. Leslie, Box 551, El Campo, Texas 77437, 713-543-2598 home or 713-543-2738 office.

LARGE, BEAUTIFULLY FURNISHED OFFICE of the late A. J. Morris, M.D., now available for lease or sale. Excellent location, across street from well established shopping center with good drug store. Adequate space for two doctors; perfect space for one. Contact Mrs. A. J. Morris, 3661 Monticello Drive, Fort Worth, 817-737-7312.

GENERAL AND PEDIATRIC PRACTICE FOR SALE in southwest San Antonio, Texas. Office furnishings included. Potential gross income $80,000 to $100,000 per year. For additional information, please contact Dr. L. Garza, AC512-924-4835, or write 6315 South Zarzamora, San Antonio, Texas 78211.

HOUSTON, TEXAS. Excellent opportunity to step into established doctors office. Fully equipped, designed for alone or association. Patient records. Located in fast growing industrial, northeast area. Hospitals only minutes away. Area in dire need of another physician. Clinic is for lease with option to buy. Call 713-682-3403.

DOCTOR RETIRING: Medical clinic for sale, lease or rent. Will support one or two doctors and dentist. Competent help available. 80 bed hospital. Industrial, farm and ranch income. Excellent recreational facilities. Community support assured. Reply to Ad-496, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OFFICE SPACE FOR RENT in Austin, Texas. Furnished or unfurnished in three-doctor medical building. Associate with two men in general practice. Please reply to H. L. Williams, M.D., #7 Medical Arts Square, Austin, Texas 78705.

FAMILY PRACTICE CLINIC FOR SALE, accommodate one to three doctors. Lab, x-ray, EKG and everything necessary for general practice in Slaton, Texas. Hospital privilege available in open staff, accredited 50 bed Mercy Hospital. Fifteen miles from Lubbock and new Texas University Medical School and rapidly developing medical center. Contact Mrs. M. J. McSween, Jr., 2329 33rd, Lubbock, Texas 79411, phone 797-2050 before noon or Browning and Marriott Real Estate, Slaton, Texas, phone 828-3216 or 828-3208.

FOR SALE: 120 acres of land near intersection of IH35 and IH40 in Oklahoma City limits. $200,000. liberal terms available. Contact William Emery, 1725 Dorchester Place, Oklahoma City, Oklahoma 73120.

TIRED OF THE RAT RACE?...

Major petrochemical company has opening for PLANT MEDICAL DIRECTOR in Houston, Texas production facility. A challenging new post for a physician strong in clinical, occupational and preventive medicine, with an interest in occupational medical administration. 40-hour week. Excellent fringe benefits. Will direct occupational health program for 3300 employees. 7 nurses in existing department. Salary negotiable.

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Advertising Directory

Abbott	40
Ayerst Laboratories	50-51
Beverly Hills Hospital and Clinic	119
Blue Cross-Blue Shield of Texas	4-5
Borden Dairy Products	41
Burroughs Wellcome Company	49
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
The Diagnostic Clinic of San Antonio, P.A.	123
Doctors' Park, Denton	129
Dorsey Laboratories	32
El Paso Psychiatric Clinic	53
Flint Laboratories	94-95
Russell Grace Insurance	53
Ives Laboratories, Inc.	26
Mead Johnson Laboratories	19, 96
Kelsey-Seybold Clinic	82
Eli Lilly and Company	54
Marion Laboratories, Inc.	42-43
The Martin X-Ray and Radium Clinic	138
McNeil Laboratories	35
Medical Arts Clinic of Corsicana	128
The Medical Protective Company	129
Memorial City Medical Center, Houston	141
The Pharmaceutical Manufacturers Association	38-39
William P. Poythress & Co., Inc.	31
The Prudential Insurance Company of America	9
Radiology Associates of Fort Worth	128
Roche Laboratories	1-2, 14-15, 124-125, 144-145
Roerig	76, 121-122
Scott and White Clinic	Back Cover
Searle & Co.	74-75
Seaview Hospital	24
The Selwyn School, Denton	36
Smith Kline & French Laboratories	73
Starlite Village Hospital	138
Surgical Mechanical Research, Inc.	123
Texas Medical Association	
Annual Session	97-100, 120
Automobile Leasing Program	93
European Adventure	3rd Cover
Memorial Library Fund	114
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	128
The Upjohn Company	126-127
Wallace Pharmaceuticals	36-37
Warner/Chilcott	24-25
Wichita Falls Clinic-Hospital	36

Physicians' Directory	130-138
Classified Advertisements	139-141

Editorials

MEDICAL LEADERSHIP NEEDED IN NURSING HOME PATIENT CARE

Are we physicians going to be our own masters, or are we going to abandon our leadership in medical affairs to nonphysicians?

Again we are assailed by the health and medical care planners and theoreticians in the latest assault on our leadership. This is in reference to the proposed HEW regulations for skilled nursing facilities; section 405.1122 (b) of the proposed rules would make a physician, *a registered nurse,* or a medical staff responsible for the execution of patient care policies.

Fortunately, the AMA recognized the erosion of physician leadership inherent in including a registered nurse as being responsible for execution of patient care policies. Objection was made before the Senate subcommittee on long-term care of the aged, and also to the Commissioner, Social Security Administration.

The AMA emphasized that overall patient care policies should be the responsibility of an organized medical staff or a full-time or part-time medical director.

Dr. Edward J. Lorenzo of the AMA Committee on Aging told the Senate subcommittee, "While there is no question that nurses could have a major role in the execution of patient care policies, we strongly believe that *responsibility* for this function belongs *only* to a physician or an organized medical staff."

According to guidelines recommended by the AMA, skilled nursing facilities could be improved if each had a medical director with the responsibility (1) to help define the scope and characteristics of the services provided at each level of care, (2) to share in developing standards of care for each discipline such as nursing and rehabilitation, (3) to help insure quality controls, and (4) to assume responsibility for overall management and delivery of patient care services, by agreement with the administration.

The key words to the idea of leadership are "assume responsibility," "accept responsibility," and "be a responsible person."

There are no easy and pat reasons why we physicians are losing our leadership in the health and medical professions. It is not that we are lazy, indifferent, or too busy. It is because *we don't want to become involved.*

Become involved. Start with your local county medical society by having an active and involved committee on aging. Go to your nursing homes and ask, "What can we physicians do to help you develop and maintain a high standard of health and medical care for your patients?"

The problems facing skilled nursing home facilities are varied, but a good start toward solving these problems can be made by the physician who is willing to accept his responsibilities.

Bernard Rosen, MD, Corsicana, Chairman, TMA Committee on Nursing Homes.

GOOD NEWS: SYPHILIS IS DOWN BAD NEWS: GONORRHEA IS UP

The incidence of syphilis is declining while the number of reported cases of gonorrhea has increased sharply in Texas during the past year.

These are trends seen by the Texas State Department of Health as its officials tabulate the 1973 information on the current status of venereal disease in the state. The comprehensiveness of the data has been attributed to the cooperation of Texas physicians in case reporting. The health department extends a sincere "thank you" to the membership of the Texas Medical Association for its assistance in the continuing drive to rid Texas of these diseases.

During the past few months, physicians have received from the health department "venereal disease case cards" which, when completed and returned, form the basis for statewide statistics on the incidence of venereal disease.

There were 279 (15.5%) fewer reported cases of primary and secondary syphilis in 1973 than in 1972, and the number of cases has dropped by 45% since 1970. If the present program of casefinding and treatment continues unchanged, the downward trend in incidence of syphilis is expected to continue.

Increased casefinding efforts resulted in the reporting of 64,210 cases of gonorrhea (excluding cases in military personnel) in 1973. This represents approximately a 50% increase above the number of cases reported in 1970. Primarily, the increase was the result of diagnosis and treatment of many cases in females. With the continued diligence in case reporting by practicing physicians and with intensified casefinding efforts, the health department is confident that the reservoir of asymptomatic infections in women can be reduced substantially, and that the incidence of gonorrhea in Texas will start declining in 1974.

J. E. Peavy, MD, Austin, Commissioner of Health, and Thomas G. Glass, Jr., MD, San Antonio, Chairman, TMA Committee on Public Health.

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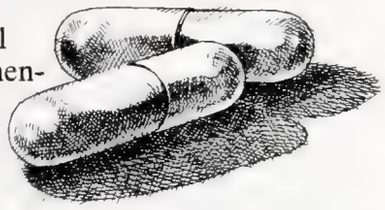

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Medicine: A Public Utility?

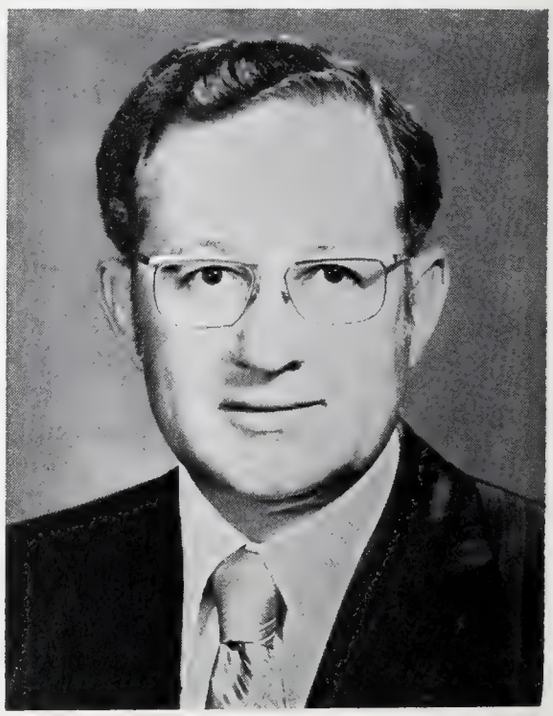
In some of our socialistic and liberal theaters of thinking, we have heard rumors of considering medicine a public utility. In May, 1971, the governor of Wisconsin created a 45-member health planning task force to study Wisconsin's health care system and recommend alternatives for meeting the state's pressing health problems, to assure "the right of every citizen to receive adequate health care." Among nearly 150 recommendations, some of the most significant ones regulating the health care system would in effect create a central state utility which would have virtually total control of all rates. The state would set up a system to review, approve, disapprove, or modify changes made by hospitals or other health care institutions, including physicians' and dentists' fees. Also, all standards for quality of health care would be set by this commission. All health care institutions would have to be licensed to meet minimum standards of service, equipment, and personnel. This would include uniform licensing for physicians' offices as well as for physicians as professionals. All institutions, including physicians' offices, would be required to obtain a certificate of need if they built or expanded with capital expenditures of $100,000 or more, or made any change in service involving a capital expenditure of any amount.

Thus far, the State Medical Society of Wisconsin has successfully opposed this concept of almost total state control of health care services. To date, the public utility package bill has not been able to muster sufficient support for passage. Because of this, proponents are now dividing the bill into segments and are especially emphasizing the "certificate of need" proposal. Dr. John E. Dettmann, Green Bay, the president-elect of the State Medical Society of Wisconsin, has said that the proponents of the commission concept are seeking to make the public utilities concept of medical care a nationwide effort through state legislatures.

Medicine a public utility? No! Medicine is a science and an art. It deals with all aspects of human health needs. It can never be equated in terms of kilowatt hours, gallons per month, or thousands of cubic feet. It has always been, and must remain, a one-to-one relationship with the physician understanding the concerns, needs, and dignity of the patient, and the patient recognizing the compassion, humanity, and dedication of the physician.

Charles B. Dryden M.D.

Charles B. Dryden, MD, President, Texas Medical Association.



Apr 74

Texas Medicine

Renal disease

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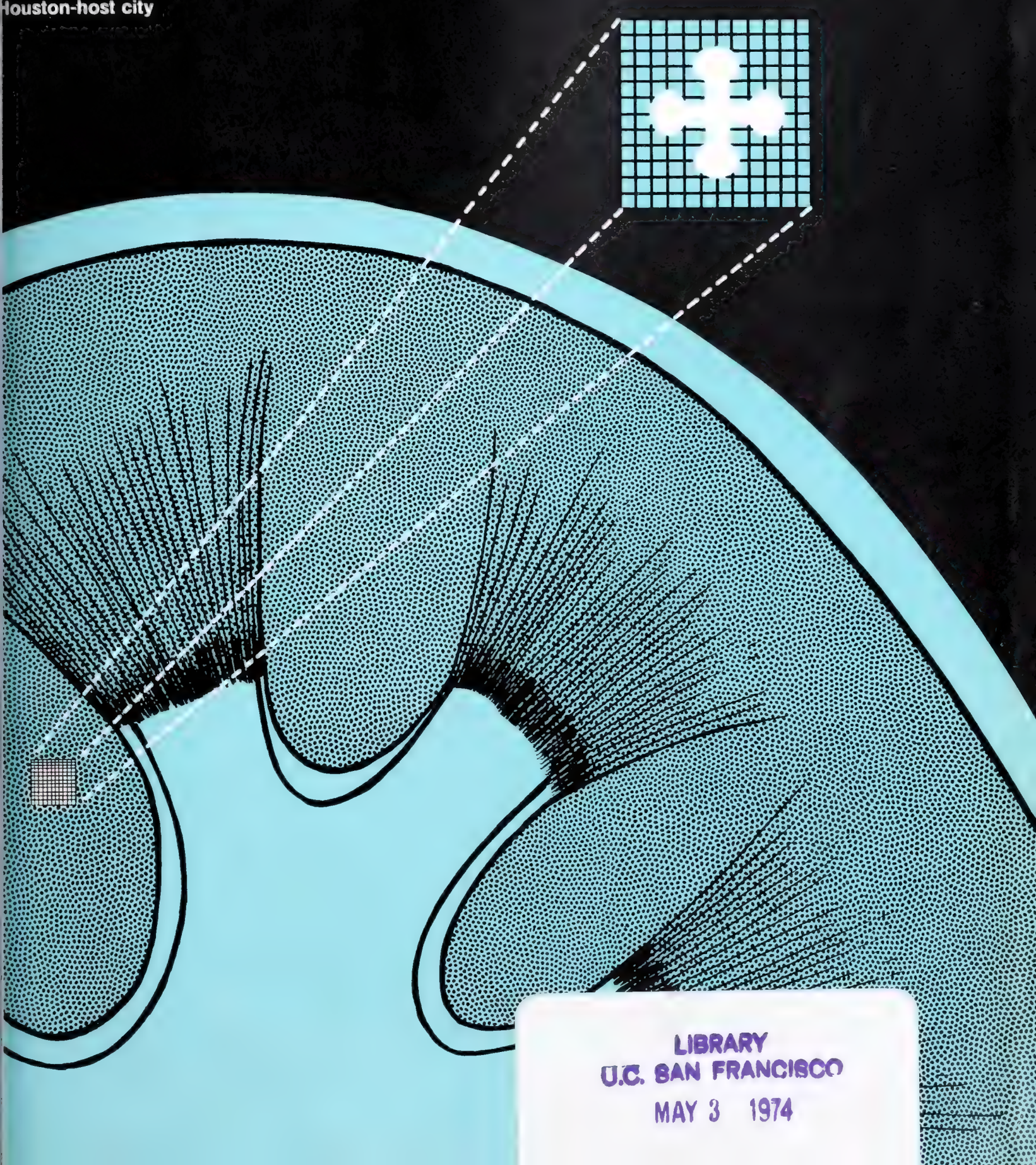
Houston-host city



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Contents

SCIENTIFIC ARTICLES

55 Clinical examination of renal function
Dr. Howard B. Garfinkel; Dr. Meyer D. Lifschitz

62 Managing chronic subdural hematomas and effusions in infants: A continuing dilemma
Dr. Phillip M. Forman; Dr. Bradley E. Chips; Dr. Glenn A. Meyer

71 Dacryocystorhinostomy in children
Dr. R. Larry Brenner

74 Tracheobronchial injuries secondary to blunt thoracic trauma
Dr. David E. Beesinger; Dr. Frederick L. Grover; Dr. J. Kent Trinkle

83 Early results of parietal cell vagotomy without drainage in the treatment of duodenal ulcer
Dr. Paul H. Jordan, Jr.

95 Intraosseous ganglion cyst of the patella: Report of a case
Dr. Terrence E. Carter; Dr. Lee C. Detenbeck

EDITORIALS

142 HEW ignores doctors' PSRO views: trustees pledge all-out fight
Dr. John M. Smith, Jr.

143 Delegates, reference committees need input from TMA members
Dr. Jack B. Lee

143 Renal disease for the clinician
Dr. Marvin Forland

148 Thoughts at year's end
Dr. Charles B. Dryden

FEATURES

102 Houston offers spectrum of events for TMA 107th Annual Session

105 Fiddling around for fun

NEWS

6 Executive Board meets

7 Final PSRO designations

8 TMA delegates to face issues

10 HMO grant cycle

10 Dr. Sammons appointed

15 Diabetes screening results

15 Houston 'big brothers'

16 Reye's syndrome

16 Students choosing family practice

16 Education funds

20 Consultation system expands

20 Licenses issued

21 Dallas expansion

23 Medical TV series

23 Baylor-Methodist grant

25 Construction approved for UT Houston

25 Kit for renal patients

DEPARTMENTS

26 Capital Comments

35 Continuing Education

40 Information for Authors

46 Coming Meetings

108 Legal Protection: Facts You Should Know

109 Medicine and the Law

113 Questions/Answers

114 Medicine in Literature

115 Medical Newsmakers

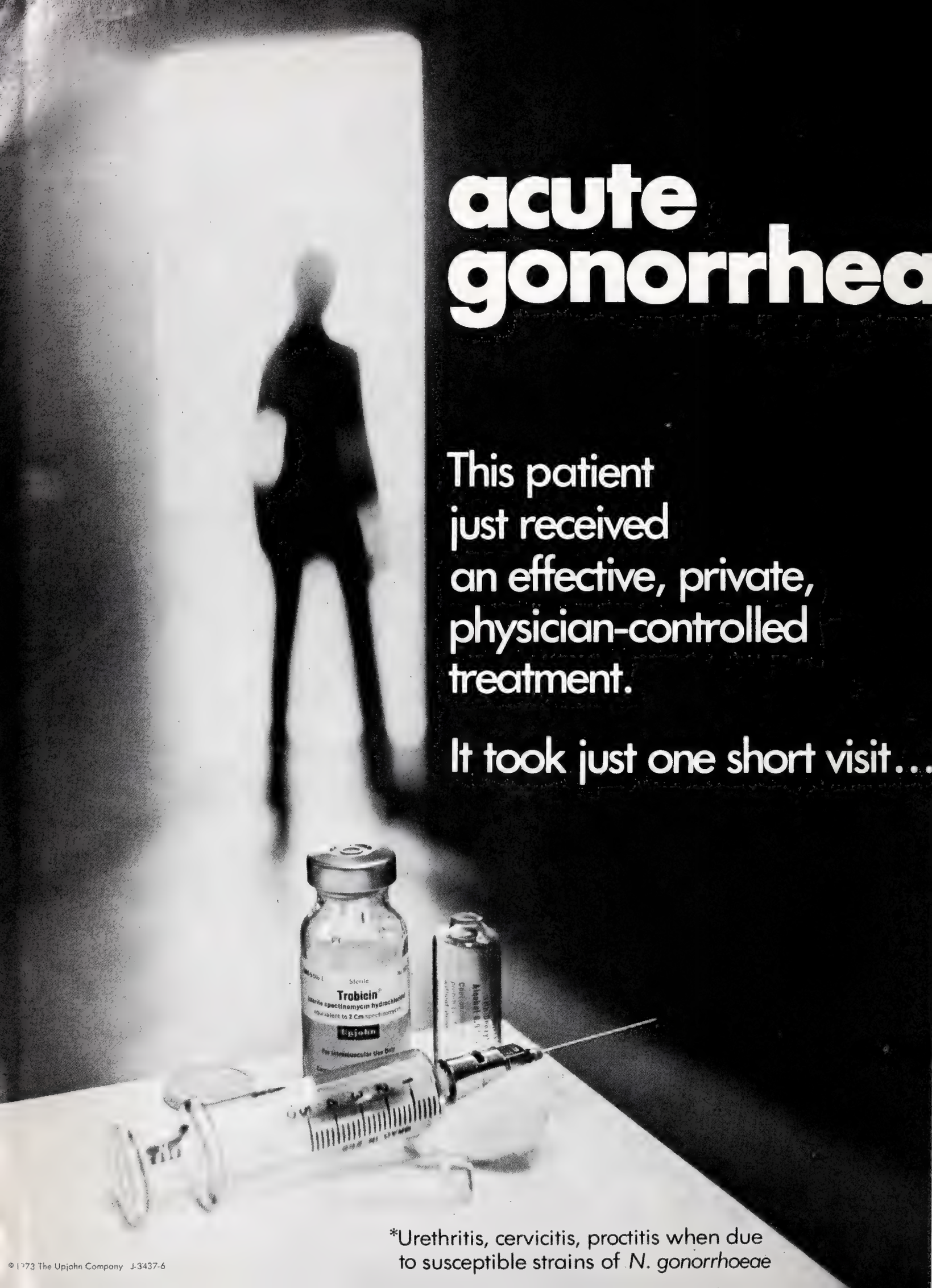
117 Recent Deaths

ON THE COVER

In urinalysis, doubly refractile fat bodies show up as Maltese crosses under crossed polarized light. Their significance is one of the points mentioned in the article on examining renal function, which begins on page 55. This is the first of a series of articles on renal diseases to be prepared under the guidance of Dr. Marvin Forland, professor of medicine and chief of the Division of Renal Diseases at The University of Texas Health Science Center at San Antonio.

NEXT MONTH

Articles in May will be on the practical application of urologic diagnostic techniques; post-exposure rabies prophylaxis; early treatment of blunt chest trauma; slow ventricular tachycardia documented by His bundle electrograms; prenatal diagnosis in the prevention of genetic disease; changing concepts in treatment of ruptured omphalocele; and preventing coronary heart disease—the pediatrician.



*Urethritis, cervicitis, proctitis when due to susceptible strains of *N. gonorrhoeae*

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Trobicin—The advantage of injectable therapy.
Once Trobicin is injected, treatment is usually complete; there can be no problems with patients sharing, skimping, skipping or forgetting medication.

Trobicin—The aspect of privacy.
There are no prescriptions to fill, no capsules to take. Neither family, friends nor co-workers need know or suspect the patient's problem.

Trobicin—Indication and dosage.
Spectinomycin is indicated only for use in acute urethritis and proctitis in the male and acute cervicitis and/or proctitis in the female when due to susceptible strains of *N. gonorrhoeae*. The usual dosage for Trobicin in adult males is 2 grams intramuscularly†; 4 grams intramuscularly in females.

Trobicin—Not effective for syphilis.
Trobicin is not effective for any stage of syphilis. Trobicin may mask or delay the symptoms of incubating syphilis. If concurrent syphilis is suspected, follow the patient serologically for at least 3 months. Patients with syphilis should receive adequate specific anti-syphilitic therapy with an appropriate antibiotic. Trobicin is contraindicated in patients previously found hypersensitive to it.

Intramuscular

...and Trobicin® 2 gm and 4 gm vials
sterile spectinomycin hydrochloride

Sterile Trobicin
Sterile Trobicin (spectinomycin hydrochloride) —For Intramuscular Injection:
2 gm vials containing 5 ml when reconstituted with diluent.
4 gm vials containing 10 ml when reconstituted with diluent.
An aminocyclitol antibiotic active *in vitro* against most strains of *Neisseria gonorrhoeae* (MIC 7.5 to 20 mcg/ml). Definitive *in vitro* studies have shown no cross resistance of *N. gonorrhoeae* between spectinomycin and penicillin.

Indications: Acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

Contraindications: Contraindicated in patients previously found hypersensitive to spectinomycin.

Warnings: Not indicated for the treatment of syphilis. Antibiotics used to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Patients should be carefully examined and monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected.
Safety for use in infants, children and pregnant women has not been established.

Precautions: The usual precautions should be observed with atopic individuals.
Clinical effectiveness should be monitored to detect evidence of development of resistance by *N. gonorrhoeae*.

Adverse reactions: The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.
During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single- and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

Dosage and administration: Keep at 25° C and use within 24 hours after reconstitution with diluent.
Male—Inject 5 ml intramuscularly for a 2 gram dose. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.
Female—Inject 10 ml intramuscularly for a 4 gram dose.
How supplied: *Vials, 2 and 4 grams—with ampoule of Bacteriostatic Water for Injection with Benzyl Alcohol 0.9% w/v.* Reconstitution yields 5 and 10 ml respectively with a concentration of 400 mg spectinomycin per ml (as the hydrochloride). For intramuscular use only.
Susceptibility Powder—for testing *in vitro* susceptibility of *N. gonorrhoeae*.
Caution: Federal law prohibits dispensing without prescription.
For additional product information see your Upjohn representative or consult the package insert.

Upjohn MED B-5-S (MBR-1)
The Upjohn Company, Kalamazoo, Michigan 49001

†For patients with gonorrheal proctitis and for patients in geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams is preferred.

NEWS

Executive Board approves actions on PSRO, future projects, insurance coverage

Meeting in Austin on March 23, the Texas Medical Association's Executive Board voted to pursue appropriate legal action to challenge recent Department of Health, Education and Welfare regulations which call for the State of Texas to be divided into nine separate Professional Standards Review Organizations (PSRO). It is anticipated that other interested medical organizations may desire to join in any legal action.

The recommendation came from the Board of Trustees, who had been charged by the House of Delegates to "use every possible means to effect the designation of the State of Texas as a single PSRO area."

The Trustees reaffirmed their intention to use all means available to effectuate the will of the membership of TMA. The Trustees declared that the action was necessitated by the arbitrary regulations announced by HEW. They called for every Texas physician to give all-out support to the PSRO challenge. (See related editorial, p 142.)

The Board of Trustees also reported that it had approved funds for an educational campaign to inform physicians and their patients regarding the impact of PSRO legislation and its interference with the doctor-patient relationship, particularly the confidentiality of physician and hospital medical records. The Trustees reported that Texas Congressmen Robert Casey and Omar Burleson had introduced HR 13358 seeking to repeal the provision in Part B Title XI of PL 92-603 relating to PSRO.

To support the extensive programs required to fulfill the charges of the House of Delegates that the Texas Medical Association 1) seek repeal of the PSRO provision and 2) seek in the interim to have Texas designated as a single statewide PSRO, the Executive Board voted to ask the House of Delegates in May to approve a $100 assessment per member this year.

The Executive Board approved recommendations from a special committee to project future programs and activities of the Association, calling for the addition of more executive, professional, and secretarial staff in order to provide a total commitment for the physicians of Texas in the areas of socioeconomics, public education, legal and legislative activities. The committee and the Executive Board will ask the Texas Medical Association to increase Association dues from the current $80 per year to $175 per year, effective Jan 1, 1975. The committee report stated:

"The Committee is fully convinced that Texas physicians want effective representation from their state medical society. They rightfully expect our Association to stand up to government and third parties and to represent them. Association officers and the Board of Trustees are dedicated to provide that representation. This funding will be necessary to enable officers and the Board of Trustees to represent effectively the more than 12,000 members of our Association."

In other action, the Executive Board supported a proposal from the Council on Medical Service and Insurance to recommend a new Memorandum of Agreement with Prudential Insurance Company of America to continue underwriting all of the Association's group insurance programs. Dr. Walter A. Brooks, chairman, Council on Medical Service and Insurance, stated that the program has enjoyed substantial growth and the financial aspects are good. He said that the best interests of all concerned are served through the positive action of the new working agreement. The Board expressed its appreciation to the Council and the Committee on Association Insurance for their diligent efforts during the negotiations on the program.

Members of the Executive Board also conferred with top officers and staff of the Texas Hospital Association and the Texas Osteopathic Medical Association as part of their continuing efforts to maintain liaison with these and other groups.

The Executive Board conveyed its hearty congratulations to Dr. James H. Sammons upon his election as Executive Vice President of the American Medical Association. The Board unanimously agreed to urge the nomination of Dr. Joe T. Nelson to fill the vacancy on the AMA Board of Trustees caused by Dr. Sammons' election.

Final PSRO designations announced

Designated Professional Standards Review Organization (PSRO) areas for Texas increased from eight to nine according to an announcement by the Department of Health ,Education and Welfare. The final designations were published in the *Federal Register* March 18.

Other changes brought the total number of designated PSRO areas to 203, 21 more than tentatively proposed in December. A significant change allowed Georgia and Washington to operate as single PSRO areas. The two states had been divided into three areas each.

A DHEW news release stated that the agency is now prepared to accept applications for contracts from qualified physician organizations to plan PSROs, to begin operation of PSROs on a conditional basis, or

NEWS

to establish state-wide organizations to provide support services to local PSROs.

The following are the changes made in the Texas designations (refer to original designation map, *Texas Medicine*, January 1974, p 7). Cook and Denton Counties moved from Area 2 to Area 3. Fayette County moved from Area 8 to Area 6.

New Area 9 includes these counties: Val Verde, Edwards, Real, Kerr, Bandera, Gillespie, Kendall, Comal, Kinney, Medina, Bexar, Guadalupe, Gonzales, Lavaca, Wilson, Maverick, Zavala, Frio, Atascosa, Karnes, DeWitt, Victoria, Jackson, Dimmitt, LaSalle, McMullen, Live Oak, Bee, Goliad, Refugio, Calhoun, San Patricio, Arkansas, Webb, Duval, Jim Wells, Nueces, Kleberg, Zapata, Jim Hogg, Brooks, Kennedy, Starr, Hidalgo, Willacy, and Cameron.

TMA delegates to face major medical issues

More than 100 items of business will be considered for action when the Texas Medical Association's House of Delegates meets during the 107th Annual Session in Houston May 9-12.

Forty-nine council, committee, and board reports and several resolutions have been received from county medical societies for introduction to the TMA governing body. The House will vote on two amendments to the Association's Constitution and several changes in the bylaws. The proposed amendments concern a change in the title of Executive Secretary to Executive Director and the designation of medical schools (for student membership) as those approved by the Texas State Board of Medical Examiners. Among the bylaws changes are new proposals concerning dues of intern, resident and student members of TMA.

Issues anticipated to be major topics of concern and discussion center in the area of legislation affecting the state's physicians. These include Professional Standards Review Organizations (PSROs), the Texas Institute for Medical Assessment (TIMA), and Health Maintenance Organizations (HMOs).

In particular, at press time, several resolutions concerning PSROs had been submitted, including one each from the Tarrant and Bowie County Medical Societies and five from the Harris County Medical Society. The substance of the resolutions range from support for repealing the PSRO law to appointing an ad hoc PSRO committee.

Other topics to be brought before the House in the area of legislation include the health education of the poor, Medicare, Medicaid, Phase IV, TEXPAC, and others.

The Special Committee on Health Care of the Poor has recommended further investigation concerning the feasibility, financing, expansion, and adoption on a broader scale of a system for the instruction of the poor which has been used by the Texas State Department of Health. The Committee also recommended that a television project, such as that used successfully in Starr and Hidalgo Counties to encourage diabetes screening, be implemented in urban areas. The Committee has made a final recommendation that funding be sought for a prepaid capitation migrant health program in an attempt to demonstrate to federal agencies the desirability and effectiveness of such an approach.

The Special Committee on Blood Banking and Blood Transfusion has submitted five recommendations aimed at relieving problems related to regional and national blood shortages, blood distribution, blood utilization, blood quality and costs, and the diversity of groups procuring, processing, and distributing blood and its components.

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NEWS

Also on the agenda, the House will consider a proposal from the Special Committee on Emergency Medical Services regarding the adoption of a registry of emergency medical technicians and the establishment of a basic common curriculum for training EMTs.

Reference Committees will recommend proceedings to the House on matters in the categories of constitution and bylaws, legislation, medical service and insurance, public relations, scientific work, miscellaneous business, and reports of officers and committees.

Several changes will be introduced in the meeting format of the House of Delegates at the 1974 Annual Session to permit delegates to spend more time in their offices at the start of the week, to utilize Sunday more fully, to permit interested physicians to attend more of the scientific programs, and to reduce or actually eliminate the need for the House to meet in the late evening hours. The opening session of the House is set for 5 pm Thursday, May 9. Reference committees will meet Friday with the second session of the House on Saturday morning. The House could also meet on Sunday morning, if necessary, to complete its business.

Delegates may check their handbooks for complete details of the items to be considered by the House.

Feasibility grant cycle established for HMOs

Region VI of the Department of Health, Education and Welfare has established a health maintenance organization feasibility grant cycle.

The Health Maintenance Act of 1973, PL 93-222, provided $375 million for an experimental health maintenance organization (HMO) program over a five-year period. Funds available in the cycle will be limited to a maximum of $50,000. The areas that are included in this grant cycle are projects to determine the feasibility of developing and operating or expanding the operation of HMOs.

Applications for an HMO feasibility grant are to be received in the DHEW Regional Office by May 5. Applications in proper order must be received in the Central Office in Washington, D.C. by May 31. During June a notice of grant awards will be sent to selected applicants.

The second cycle under PL 93-222 will be implemented in September and will include each element of the law such as 1) grants and contracts for feasibility surveys; 2) grants, contracts and loan guarantees for planning and for initial development costs; 3) loans and loan guarantees for initial operation costs.

Dr. Sammons appointed AMA top executive

Meeting in Washington, D.C. March 17 the Board of Trustees of the American Medical Association appointed Dr. James H. Sammons of Baytown as the Association's executive vice president, the top administrative post of the organization.

Dr. Sammons assumed the duties of executive vice president-designate April 1 and will serve in that capacity until the resignation of Dr. Ernest B. Howard, current executive vice president, becomes effective next March.

Dr. Sammons was recommended by a special subpanel formed in January 1973 to seek a successor for Dr. Howard's position. The panel, appointed by former board chairman Dr. John R. Kernodle, was composed of Dr. Russell B. Roth, AMA president, and Drs. Max H. Parrott, Richard E. Palmer, and Raymond T. Holden, members of the board.

Dr. Sammons' list of credentials is lengthy. He has served as president

FEATURING

50 GUEST SPEAKERS
plus 350 special and TMA-member speakers

17 SECTION PROGRAMS
Allergy, Digestive Diseases, Diseases of the Chest, Family Practice, Internal Medicine, Nuclear Medicine, Obstetrics and Gynecology, Ophthalmology, Otolaryngology, Pathology, Pediatrics, Physical Medicine and Rehabilitation, Psychiatry, Public Health, Radiology, Surgery, Urology.

20 CURBSTONE CONSULTATIONS
Person-to-person conversational discussions of cases and problems of general medical interest.

15 CONTINENTAL BREAKFAST PRESENTATIONS
Have breakfast with a guest speaker on Friday and Saturday mornings. Enjoy coffee and rolls while the speaker presents a 15 to 20-minute lecture. Then participate in the informal 35-minute open forum which will follow.

35 SPECIAL SOCIETY PROGRAMS

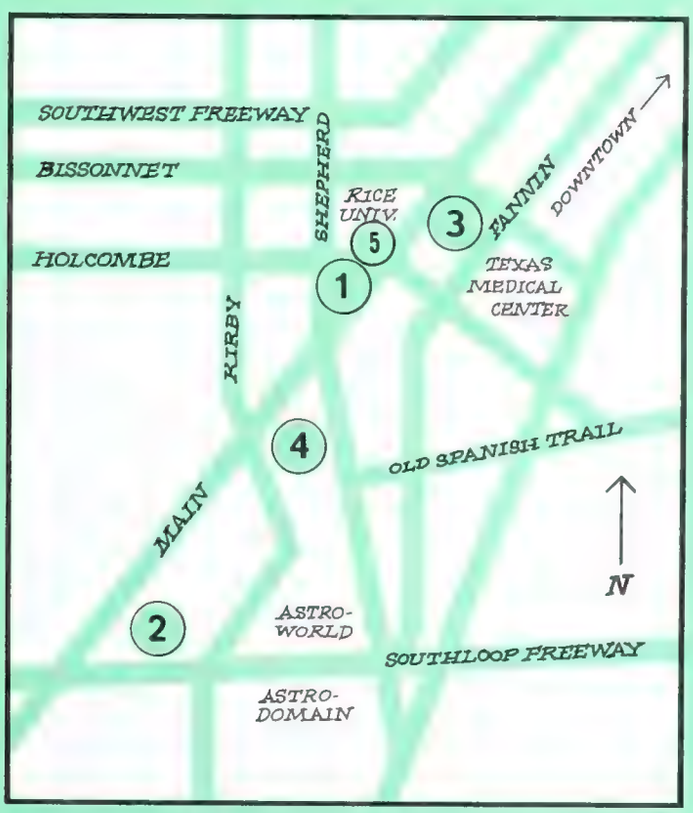
10 SPECIAL COMMITTEE SYMPOSIUMS

175 SCIENTIFIC AND TECHNICAL EXHIBITS

FORUM OF ORIGINAL RESEARCH

PHYSICIANS' and WIVES' ART EXHIBITION

SPORTS/ENTERTAINMENT
Golf and Tennis Tournaments, Fraternity and Alumni Parties, Class Reunions and TMA's Saturday Evening at the Astroworld, featuring cocktails, dinner and dancing.



ANNUAL SESSION

MAY 9-12, 1974

HOUSTON

MAKE YOUR HOTEL RESERVATIONS

Select hotel of your choice from the list, complete the housing request form, and mail it to the hotel of your preference. Confirmation of reservations will be sent directly to you from the hotel or motel.

HOUSTON HOTELS AND MOTELS

1 SHAMROCK HILTON HOTEL
Scientific Sessions and Exhibits
P.O. Box 2848
Houston, Texas 77001
Singles $18-$26
Doubles $25-$33
Twins $25-$33
Suites $55 & up

2 ASTROWORLD HOTEL/MOTELS
Business Sessions
P.O. Box 1555
Houston, Texas 77001
Singles $16-$30
Doubles $22-$36
Twins $22-$36
Suites $45 & up

3 WARWICK HOTEL
Auxiliary Meetings
5701 Main Street
Houston, Texas 77001
Singles $24-$42
Doubles $26-$50
Twins $26-$50
Suites $68 & up

4 HOUSTON MARRIOTT MOTOR HOTEL
2100 Braeswood Blvd.
Houston, Texas 77025
Singles $20-$30
Doubles $26-$38
Twins $26-$38

5 TOWERS HOTEL
2130 Holcombe Blvd.
Houston, Texas 77025
Singles $15
Doubles $18
Twins $18

ADVANCE REGISTRATION FORM—FILL OUT BOTH SIDES AND MAIL TODAY

Save time and effort by registering in advance. Fill out the card below, mail it to TMA, and your registration packet will be waiting for you. There is no registration fee for TMA members.

A form for ordering tickets to the luncheons, Saturday Evening at the Astroworld, and other events is located on the back of this Advance Registration card. Save even more time by ordering your tickets now.

NAME_____

ADDRESS_____

CITY OF RESIDENCE_____

SPECIALTY_____

CONVENTION ADDRESS_____

COUNTY SOCIETY_____

Shall pick up my convention materials at:

Shamrock Hilton Hotel

Astroworld Hotel

PLEASE CHECK THE APPROPRIATE SPACES BELOW

- ☐☐ MEMBER PHYSICIAN / NON-MEMBER PHYSICIAN
- ☐ INTERN OR RESIDENT
- ☐☐ MEDICAL STUDENT / MEMBER SPEAKER
- ☐☐ SCIENTIFIC EXHIBITOR
- ☐ GUEST REPRESENTING
- ☐ OFFICER STATE ASSOCIATION
- ☐☐ DELEGATE / ALTERNATE DELEGATE
- ☐☐☐ COUNCILOR / VICE COUNCILOR / TMA COUNCIL CHAIRMAN

ROOM WILL BE OCCUPIED BY:

NAME_____

STREET_____

CITY_____

STATE_____ ZIP_____

TYPE OF ACCOMMODATIONS

Single(s) _____

Twin(s) _____

Double(s) _____

Suite(s) _____

DATE ARRIVING

_____

HOUR _____ AM PM

DATE DEPARTING

_____

ADDITIONAL OCCUPANTS_____

_____

TEXAS MEDICAL ASSOCIATION ANNUAL SESSION MAY 9-12 HOUSTON

MAIL TO: TEXAS MEDICAL ASSOCIATION
1801 NORTH LAMAR, AUSTIN, TEXAS 78701

NUMBER OF TICKETS	FUNCTION AND PRICE (inclusive of tax and gratuity)	AMOUNT
_____	GENERAL MEETING LUNCHEON—FRIDAY @ $5.50 each	_____
_____	GENERAL MEETING LUNCHEON—SATURDAY @ $5.00 each	_____
_____	SATURDAY NIGHT AT THE ASTROWORLD @ $20.00 each	_____
	CONTINENTAL BREAKFAST PRESENTATIONS—FRIDAY	No Charge
	1___ 2___ 3___ 4___ 5___ 6___ 7___ (see list—select one)	
	CONTINENTAL BREAKFAST PRESENTATIONS—SATURDAY	No Charge
	8___ 9___ 10___ 11___ 12___ 13___ 14___ 15___ (see list—select one)	
	CHECK ENCLOSED FOR TOTAL $	_____

Place
Stamp
Here

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HOUSTON, TEXAS _____

Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions listed below. Fill out the advance ticket order form, mail it to TMA with your check, and your tickets will be waiting for you.

Friday, May 10, 12:30 p.m., Shamrock Hilton. Featured speaker will be Russell B. Roth, M.D., President, American Medical Association, Erie, Pennsylvania, who will discuss "Choosing the Legislative Rx for Medical Care."

Saturday, May 11, 12:30 p.m., Shamrock Hilton. Speaker pending.

SATURDAY EVENING AT THE ASTROWORLD—A gala evening is planned for you, featuring cocktails, dinner and dancing, Saturday, May 11.

TATIONS—Friday, May 10 and Saturday, May 11, 8:15-9:30 a.m., Shamrock Hilton. There is no charge, but attendance is limited and tickets necessary. Have coffee and rolls with a guest speaker, then participate in an informal discussion period.

BUY TICKETS AND

DAVID L. BARCLAY, M.D.
Little Rock, Ark., obstetrics and gynecology

MARTIN E. BLAZINA, M.D.
Los Angeles, Calif., orthopaedic surgery

G. M. BLEEKER, Prof. dr.
Amsterdam, The Netherlands, Ophthalmology

BURIS R. BOSHELL, M.D.
Birmingham, Ala., endocrinology

C. HARMON BROWN, M.D.
Hayward, Calif., internal medicine and sports medicine

HENRY BUCHWALD, M.D.
Minneapolis, Minn., surgery

GEORGE E. BURCH, M.D.
New Orleans, La., cardiology

EWALD W. BUSSE, M.D.
Durham, N. C., psychiatry

MR. JACK DOUGLAS
Fort Worth, Tex., Editor

HAROLD L. ENGEL, M.D.
Los Angeles, Calif., law and anesthesiology

MR. ART FRIEDMAN
Scottsdale, Ariz., consultant in health and physical fitness

JAY Y. GILLENWATER, M.D.
Charlottesville, Va., urology

I. MELBOURNE GREENBERG, M.D.
Freeport, N.Y., neurosurgery

HERSCHEL E. GRIFFIN, M.D.
Pittsburgh, Pa., public health

ROBERT P. HEANEY, M.D.
Omaha, Neb., internal medicine

GERALD G. HIRSCHBERG, M.D.
Berkeley, Calif., physical medicine and rehabilitation

MASON HOHL, M.D.
Los Angeles, Calif., orthopaedic surgery

JOHN E. HOOPES, M.D.
Baltimore, Md., plastic surgery

JOHN M. HOWARD, M.D.
Philadelphia, Pa., surgery

DOUGLAS W. HUESTIS, M.D.
Tucson, Ariz., pathology

J. T. JABBOUR, M.D.
Memphis, Tenn., pediatric neurology

EDMUND KLEIN, M.D.
Buffalo, N.Y., dermatology (tumor immunology treatment and research)

EDWARD T. KREMENTZ, M.D.
New Orleans, La., surgery

DONALD G. LANGSLEY, M.D.
Davis, Calif., psychiatry

MATTHEW A. LARKIN, M.D.
Miami, Fla., proctology

MR. WILLIAM FRED LUCUS
Indianapolis, Ind., medical director, Blue Cross

KEVIN M. McINTYRE, M.D.
Boston, Mass., cardiology

WILLIAM L. MORGAN, JR., M.D.
Rochester, N. Y., internal medicine

WIL B. NELP, M.D.
Seattle, Wash., internal medicine and nuclear medicine

OLOF H. PEARSON, M.D.
Cleveland, Ohio, internal medicine

HERBERT F. POLESKY, M.D.
Minneapolis, Minn., pathology

CHARLES E. POPE, II, M.D.
Seattle, Wash., gastroenterology

G. O'NEIL PROUD, M.D.
Kansas City, Kan., otolaryngology

CHARLES E. REED, M.D.
Madison, Wis., internal medicine (allergy and immunology)

F. P. RHOADES, M.D.
Detroit, Mich., family practice (geriatrics)

GUY F. ROBBINS, M.D.
New York, N. Y., surgery

RUSSELL B. ROTH, M.D.
Erie, Pa., President, American Medical Association

ARAN SAFIR, M.D.
New York, N. Y., ophthalmology

RICHARD D. SAUTTER, M.D.
Marshfield, Wisc., thoracic surgery

F. BLAIR SIMMONS, M.D.
Stanford, Calif., otolaryngology

NATHAN J. SMITH, M.D.
Seattle, Wash., pediatrics

ROGERS J. SMITH, M.D.
Portland, Ore., psychiatry

MRS. JACKI SORENSEN
North Ridge, Calif., President's Council on Physical Fitness and Sports

M. STUART STRONG, M.D.
Boston, Mass., otolaryngology

COACH PAUL URAM
Butler, Pa., coaching

HOWARD S. VANORDSTRAND, M.D.
Cleveland, Ohio, internal medicine (pulmonary diseases)

MORRIS WAISMAN, M.D.
Tampa, Fla., dermatology

JOSEPH P. WHALEN, M.D.
New York, N. Y., radiology

CONTINENTAL BREAKFAST PRESENTATIONS

Friday, May 10, 8:15-9:30 a.m.

1. THE DOCTOR AS WITNESS
   Harold L. Engel, M.D., LL.B.
   Los Angeles, California

2. UROLITHIASIS
   Jay Y. Gillenwater, M.D.
   Charlottesville, Virginia

3. NEW IDEAS IN CONSERVATIVE MANAGEMENT OF LOW BACK PAIN
   Gerald G. Hirschberg, M.D.
   Berkeley, California

4. CURRENT CONCEPTS IN BURN MANAGEMENT
   John E. Hoopes, M.D.
   Baltimore, Maryland

5. IMMUNOTHERAPY OF CANCER
   Edward T. Krementz, M.D.
   New Orleans, Louisiana

6. HYPERTENSION
   William L. Morgan, Jr., M.D.
   Rochester, New York

7. THE "SICK" PHYSICIAN
   Rogers J. Smith, M.D.
   Portland, Oregon

Saturday, May 11, 8:15-9:30 a.m.

8. DEPRESSION IN THE NEWBORN
   David L. Barclay, M.D.
   Little Rock, Arkansas

9. BRITTLE DIABETES
   Buris R. Boshell, M.D.
   Birmingham, Alabama

10. THE PROTRUDING EYE
    Prof. dr. G. M. Bleeker
    Amsterdam, The Netherlands

11. BLOOD COMPONENT THERAPY, 1974
    Douglas W. Huestis, M.D.
    Tucson, Arizona

12. UROKINASE IN PULMONARY EMBOLISM (PANEL)
    W. G. Johanson, Jr., M.D., Dallas, Texas, Moderator; Kevin M. McIntyre, M.D., Boston, Massachusetts; Wil B. Nelp, M.D., Seattle, Washintgon; Richard D. Sautter, M.D., Marshfield, Wisconsin

13. MARITAL COUNSELING
    Donald G. Langsley, M.D.
    Sacramento, California

14. BLOOD AND GUTS—The Management of Acute GI Bleeding
    Charles E. Pope, II, M.D.
    Seattle, Washington

15. INFANT NUTRITION
    Nathan J. Smith, M.D.
    Seattle, Washington

of the Texas Medical Association, a member of the AMA House of Delegates, and chairman of the board of directors of the American Medical Political Action Committee. He was first elected to the AMA Board of Trustees in 1970, reelected in 1973, and subsequently was elected chairman. Dr. Sammons, 47, was the youngest member of the board.
In addition to his tenure as TMA president, Dr. Sammons has given extensive service to the medical profession in Texas. Earlier service includes 11 years on the TMA Board of Councilors and TMA committee membership as well as participation in activities at the county and local levels.

Diabetes screening results released

A summary report on the diabetes screening program in Starr and Hidalgo Counties was carried in the March issue of *Texas Health Bulletin* published by the Texas State Department of Health.
The program, devised by Dr. Mario Ramirez of Roma, encompassed an unusual approach to the problem of identifying hereditary diabetes by reaching the public through television spots. (See *Texas Medicine*, January 1974 for program details) During a four-week period last fall television messages were broadcast both in Spanish and English encouraging persons to visit a local physician within 30 days for free diabetes testing.
According to the health department, 835 persons reported for the free screening on the basis of the television announcements. Of this number, 136 had positive high blood sugar.
In addition to the respondents of the TV campaign, another 440 persons were screened at regular health department clinics during the same period.
During the project, 669 tests were given in Hidalgo County, of which 102 positives were identified. In Starr County, 166 tests were made of which 34 were positive. Hidalgo County has a population of 181,000; Starr County, 18,000.
The health department also reports that regular screening for the six weeks following the campaign showed an increase in those coming in for the tests.
Among his activities, Dr. Ramirez is chairman of the Texas Medical Association's Committee on Health Care for the Poor and a member of the Council on Tax-Financed Health Care Programs.

Houston 'big brothers'— a friend in need

A practical program to familiarize medical students with the realities of medical practice has been initiated by the Western Branch of the Harris County Medical Society.
The project is called the "big brother" program, based on the pairing of students with practicing physicians. For a six month period these big brothers serve as informal teachers, counselors, and above all, friends to the students. The program is flexible and activities are determined by the paired student and physician.
The big brothers are encouraged to include the students in social events and to discuss all phases of medical practice with them including the problems of establishing an office and dealing with current political and legislative activities affecting the profession. Students unfamiliar with the Houston community have an opportunity to view the city from outside the academic environment.
In February, 35 students from Baylor College of Medicine were initially matched with physicians. Each student was assigned according to the specialty he requested. Each may be paired with physicians in other spe-

NEWS

cialties at the end of the six-month period.

Dr. Byron (Spike) Holt, president of the Western Branch, feels the program fills the gap between classroom academics and the actualities of doctors' professional and personal lives. He emphasizes that the program does not compete with any medical school program offered to students. He hopes that students from The University of Texas Medical School at Houston will join the project shortly.

Drs. Gary Friedman and Joe Dossey are the physicians supervising the program.

Health Department reports on Reye's syndrome

The Texas State Department of Health reports that Reye's syndrome, a fulminant disease usually of children, is characterized by signs of encephalopathy and hepatic failure. Although some patients have recovered, the disease is more often fatal according to Department sources.

In most cases, the child develops a mild upper respiratory infection, followed in several days by increasing lethargy, delirium, and seizures. Physical examination often reveals hepatomegaly in a semi-comatose child. Hypoglycemia occurs in two-thirds or more of the cases. Treatment has involved intravenous glucose and insulin as well as exchange transfusion.

At the present time, the etiology of this syndrome is not known. Toxic and infectious agents have been postulated but not proved. Since Dec 1, 1973, the National Center for Disease Control has received reports of 16 cases of an illness compatible with Reye's syndrome from seven states. As Reye's syndrome in the past has been associated with epidemics of Influenza B, which has been prevalent in Texas, the State Health Department is interested in obtaining reports of possible cases of Reye's syndrome. Throat cultures (frozen) and acute and convalescent sera for Influenza B would be useful in studying this association.

The Texas State Department of Health, Communicable Disease Services Section encourages physicians to call for further information on laboratory specimens, diagnosis, or treatment.

More med students choosing family practice

A survey of 1974 graduating medical students by the American Academy of Family Physicians shows that more medical students than ever before are choosing family practice as their specialty, and that the demand for first-year spaces in family practice residencies exceeds the number of spaces available by almost two to one.

The purpose of the study was to determine what deficit, if any, existed in first-year spaces before the National Intern and Resident Matching Program results are released.

By February 160 of the 191 approved residencies reported 2,014 graduates seeking first-year spaces. Estimated spaces available are approximately 1,170, leaving a deficit of 844 graduates desiring first-year spaces.

It is estimated that approved family practice residency training programs will probably reach the 230 mark by Jan 1, 1975.

Funds to aid education of migrant children

Texas has received $16,078,330 in federal funding to aid in education of 76,000 children of migrant agricultural workers.

This grant is one of the federal grants totaling $18,818,399 which were awarded to the five states in the Department of Health, Education and Welfare's Region VI to benefit 91,740 children.

The grants will be administered by

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PRESCRIBING INFORMATION

Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles.

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WORMS BLITZED

A single dose of Antiminth (1 cc. per 10 lbs. of body weight, 1 tsp./50 lbs.—maximum dose, 4 tsp.=20 cc.) offers highly effective control of *both* pinworms and roundworms.

Antiminth has been shown to be extremely well tolerated by children and adults alike in clinical studies.* Pleasantly caramel-flavored, it is non-staining to teeth and oral mucosa on ingestion... doesn't stain stools, linen or clothing.

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Pinworms, roundworms controlled with a single, non-staining dose of

ANTIMINTH®

(pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

*Data on file at Roerig.

Please see prescribing information on facing page.

NEWS

each state's department of education.
A comprehensive education program will be offered for migrant students during both the regular and summer terms. Special emphasis will be placed on remedial instruction in language arts and other academic areas using teaching methods designed to meet the needs of students who transfer often during the school year.
The education programs will also provide meals and health care for the children.
The other grant totals and the number of children being served are: New Mexico, $919,497 (7,100); Oklahoma, $699,254 (1,600); Arkansas, $679,574 (5,800); and Louisiana, $441,744 (1,240).

Cancer consultation system expands services

Expansion of the Telephone Consultation and Education in Cancer System has made the service available to more than 60,000 health professionals in 16 states and the District of Columbia.
Originally funded by the Regional Medical Program of Texas, the program was initiated in 1970 as the Dial Access Project for Cancer Consultation at M. D. Anderson Hospital and Tumor Institute in Houston. The system makes available toll-free telephone calls for physicians, dentists, nurses, and other health professionals to obtain the most recent diagnostic and therapeutic information on specific neoplastic disease problems.
M. D. Anderson Hospital, the Southern Medical Association, and the Texas State Department of Health are currently co-sponsoring the system with partial funding from the Cancer Control Branch of the National Cancer Institute.
Hours of operation are 8 am to 7 pm (CDT) Monday through Friday and 8 am to 11 am Saturday. Phone numbers are: Houston, 747-5942; Texas outside Houston, 1-800-392-3917; all others, 1-800-231-6970. Areas included in the program are Alabama, Arkansas, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.
Health practitioners using the system for the first time are asked to complete a questionnaire for use in the assessment of the project's effectiveness.

Licenses issued to 191 examinees

Licenses were issued to 191 examinees at a meeting of the Texas State Board of Medical Examiners Jan 18-20 in Austin.
A breakdown of the examinees shows 72 foreign graduates, 103 graduates from Texas schools, and 16 graduates from out-of-state schools. Twenty-three persons failed the examination. Licenses were also issued to 132 reciprocity applicants of whom 33 were foreign graduates. Two duplicate licenses were issued, and four licenses were reinstated which had been cancelled for non-payment of annual registration fee.

"I think you have appendicitis but I would like to keep my options open."

Dallas expansion to double enrollment

Four new buildings, comprising most of the $40 million building program expanding The University of Texas Southwestern Medical School at Dallas, will be finished in time for occupancy this fall. The expansion will enable the medical school to double to 200 the number of medical students accepted.

The structures will be named for families well known for their philanthropy and community service in recognition of major gifts which provided more than $8.5 million to the medical school's expansion program. Names as affirmed by the UT Board of Regents are the Eugene McDermott Academic Administration Building, the Cecil H. and Ida Green Science Building, the Tom and Lula Gooch Auditorium, and the Fred F. Florence Bioinformation Center.

The new buildings will house administrative offices, classrooms, laboratories, lecture halls, a 1,200-seat auditorium, an expanded medical library, audiovisual and computer facilities, and others.

Agency publishes booklet on pollution effects

The US Environmental Protection Agency has published a new booklet entitled "Health Effects of Environmental Pollution."

The illustrated 24-page color pamphlet describes various adverse effects that the pollution of the environment has on human beings. In particular, the booklet gives some insight on the role of the environment in such diseases as bronchitis.

The booklet is available without charge from the Office of Public Affairs, Dept MED, US Environmental Protection Agency, Washington, D.C. 20460.

Pediatric Red Book published

The 17th edition of the American Academy of Pediatrics' *Report of the Committee on Infectious Diseases* has been released by the AAP.

Commonly known as the *Red Book*, the report serves as the standard reference on the diagnosis, treatment, and prevention of infectious diseases in North and South America.

The *Red Book* includes chapters on active and passive immunization, summaries of infectious diseases, information about drug dosages, and recommended immunization schedules for normal children.

The report is distributed free to all 15,000 AAP members in North and South America. Nonmembers may order a copy by writing the AAP, Dept P, PO Box 1034, Evanston, Ill 60204. Cost is $3 per copy.

Stroke clubs fulfill special patient need

Founded in Galveston in 1968 under the guidance of two University of Texas Medical Branch physicians, stroke clubs now comprise an international organization covering the United States and six other countries.

One of the Galveston Stroke Club's original members, Ellis Williamson, said that through group interaction stroke victims help each other to overcome the physical and psychological problems caused by a stroke. The clubs also serve as a resource center for literature and other information to assist the stroke victim in adjusting to disabilities.

The Galveston Stroke Club is affiliated with the Texas and the American Heart Associations. Anyone wishing information on the Galveston club may contact Ellis Williamson, Bay Area Chapter, 805 12th St, Galveston 77550.

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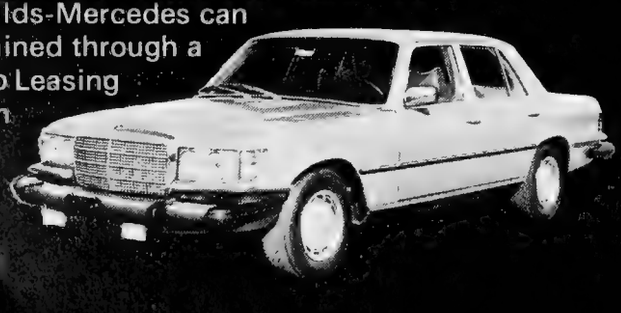

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Immunizable disease cases total over 1800 in 1973

The Texas State Department of Health has released provisional figures for immunizable diseases in all ages of the population during 1973.

The record shows the following totals: tetanus, eight cases; diphtheria, 18 cases; measles, 533 cases; rubella, 1,129 cases; and pertussis, 115 cases.

According to the department immunization emphasis has been focused on the pre-schooler since 1971 when the compulsory school immunization law became effective.

Rubella immunizations began in October 1969 while compulsory smallpox immunizations were discontinued after 1971. There has not been a reported case of smallpox in Texas for 25 years.

Medical TV series launched in Dallas

The Dallas public television outlet launched a new medical series, "MD," March 14 in cooperation with The University of Texas Southwestern Medical School.

Dr. Daniel W. Foster, professor of internal medicine at the medical school, serves as host of the discussion with various guest physicians/experts.

The half-hour format features live studio discussion and film reports. During the final segment of the program, viewers have an opportunity to phone-in on-air with their questions to the doctors.

According to the station, the purpose of "MD" is three-fold: 1) to inform people about detection and prevention of various medical problems; 2) to demonstrate the importance of research in learning about disease and its ultimate treatment; and 3) to acquaint the audience with the great medical resources in the Dallas/Fort Worth communities.

Almost 7,000 centenarians receiving benefits

According to *JAMA*, Feb. 4, almost 7,000 persons believed to be at least 100 years or older were receiving Social Security cash benefits as of last June.

More than half (53.6%) lived in the ten states with the highest number of older persons—New York, 10.8%; California, 9.8%; Pennsylvania, 5.5%; Illinois, 5.4%; Massachusetts, 4.3%; Ohio, 4.0%; Florida, 3.7%; Texas, 3.5%; New Jersey and Michigan, 3.3% each.

Seven out of ten cash recipients were women. Of the 35 states with 60 or more beneficiaries 100 years or older, the proportion of women ranged from a low 50.6% (Mississippi) to a high of 83.6% (Colorado).

Of all beneficiaries 100 or older, 87.5% were white, 11.5% were black and 1.0% were "other." Almost three-quarters of the whites were women compared with only slightly more than half of the blacks.

Baylor-Methodist center receives grant

The Baylor-Methodist Center for Cerebrovascular Research has received a $1.5 million research grant from the National Institute of Neurological Diseases and Stroke of the US Department of Health, Education and Welfare. The three-year grant, which began on Feb 1, was announced by Dr. John S. Meyer, chairman of the department of neurology at Baylor College of Medicine.

The Baylor-Methodist Stroke Center is one of only 12 to 15 such centers across the nation. The Center, which has existed since 1970 at The Methodist Hospital, is expected to be incorporated into a planned $24 million Neurosensory Center, a joint venture of Baylor and Methodist to be constructed in the next three years.

NEWS

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BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action: begins to work within 30 minutes...yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

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These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

*Based on surveys of average daily prescription costs.

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Contraindications: Sensitivity or idiosyncracy to barbiturates; history of manifest or latent porphyria or marked liver impairment; respiratory disease with dyspnea or obstruction; history of addiction to sedative/hypnotic drugs; uncontrolled pain, to avoid because of possible excitement.
Precautions: Exercise caution in: moderate to severe hepatic disease; anticoagulant therapy, because of possible increased metabolism of coumarin anticoagulants; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects.
Adverse Reactions: Slight hangover, drowsiness, lethargy, headache, skin eruptions, nausea and vomiting, hypersensitivity reactions (especially in those with asthma, urticaria, angioneurotic edema, or similar conditions).
Usual Adult Dosage: For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg.
Available as: Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

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Construction approved for UT Houston

Preparation of a cost estimate and preliminary plans for the third-phase construction at The University of Texas Medical School at Houston have been authorized by the UT System Board of Regents.

The Regents appointed the Austin firm of Brooks, Barr, Graeber and White as project architect. That firm was project architect for the Phase II construction, presently under way.

The third-phase building program will allow an entering class of 200 medical students, the original goal of the school. The Phase II construction will accommodate 100 entering students.

Self-instructional kit for renal patients

A self-instructional package for patients with kidney disease has been developed by the Renal Program of Texas with support from the Regional Medical Program of Texas.

A booklet, accompanied by a series of slides and recorded tapes or an explanatory text, was designed to provide patient education on dietary management of kidney disease.

Work is in progress on the Renal Diet Booklet which will supplement the self-instructional package. Dr. Garabed Eknoyan is project director.

AMA Council to accredit medical assistant programs

The Council on Medical Education of the American Medical Association, in collaboration with the American Association of Medical Assistants, has been recognized by the US Commissioner of Education as an official agency to accredit educational programs for the medical assistant.

AMA and AAMA have collaborated on the accreditation of medical assisting programs since July 1969, when curriculum standards were approved by the AMA House of Delegates. To date, 58 one and two year programs have been approved in junior and community colleges and proprietary schools.

NEWS

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment media	Original price 9-30-68	Current adjusted price 2-28-74	% Change from 9-30-68
Mercantile National Bank Stock Fund	$10.25	$ 9.86	− 3.81
Loomis-Sayles Capital Development Fund	14.20	13.67	− 3.73
T. Rowe Price Growth Stock Fund[2]	25.93	13.63	+ 5.09
Loomis-Sayles Mutual Fund	16.82	18.34	+ 9.04
Stein Roe & Farnham Balanced Fund	23.34	25.62	+ 9.77
Mercantile Bank Fixed Income Fund	10.00	11.60	+16.00
Standard & Poor 500 Stock Average	101.34	96.22	− 5.05
Dow Jones Industrial Average	935.79	860.53	− 8.04

[1]Includes accumulated dividends and capital gains since 1968.
[2]Stock split two for one, May, 1973.

CAPITAL COMMENTS

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature and Texas administrative agencies.

AUSTIN: Recent appointments by Gov Dolph Briscoe. Drs. Sam A. Nixon, Floresville; C. C. Pate, Paducah; and Ed W. Schmidt, Pecos, were appointed to the State Rural Medical Education Board. Drs. Nym Barker, Paris; and Robert Moreton, Houston; were reappointed to the State Board of Health. Dr. Alfredo Gutierrez, Jr., Del Rio, was appointed to the Advisory Commission on Intergovernmental Relations. In addition, Mrs. Naomi Cox Andrews, wife of Dr. Rawle Andrews, Houston, was appointed to the Texas Southern University Board of Regents.

WASHINGTON: The Department of Health, Education and Welfare (DHEW) has announced the appointment of Dr. Floyd Norman, Dallas, as Regional Health Administrator for the Public Health Service in the Southwest Region. Dr. Norman will be responsible for all DHEW health activities in Texas, New Mexico, Oklahoma, Arkansas and Louisiana.

WASHINGTON: Two Texas congressmen, Reps Bob Casey and Omar Burleson, have introduced HR 13358 which would repeal the professional standards review organization (PSRO) section of PL 92-603.

WASHINGTON: Sen Jacob K. Javits (R-NY) has introduced S 3166, the Administration's health planning bill, to be known as the Health Resource Planning Act. This bill replaces current authority for Comprehensive Health Planning, Regional Medical Program, Hill-Burton, Area Health Education Activities, and Assistance for Experimental Health Services Delivery Systems. The bill provides assistance for the formulation of a nationwide network of health system agencies, which would be responsible for fostering alternative health care arrangements, the elimination or reduction of health resource duplications, the establishment of an adequate supply of distribution of resources, the improvement of the efficiency and productivity of health care providers, the continuing education of health personnel, and the coordination of all segments of the health care market. The governor of each state would designate geographical regions within the state as health service areas, each of which would be served by a health system agency (HSA) certified by the Secretary of DHEW. The Secretary would make grants for the operational expenses of an HSA and provide it with a broad range of technical assistance grants and contracts to further the comprehensive health plan for its health service area. The HSA would have to be a non-profit, private corporation, not composed of providers or insurers of health service or an educational institution. One-half of the HSA governing body would have to represent consumers or state or local officials. The other half would represent health care providers and institutions. The bill also establishes a formula grant program to

assist the states in paying the cost of regulating capital expenditures related to health care and otherwise to establish or regulate rates used for the payment of health care services. The formula grant allotment would be in accordance with the populations of the respective states and the cost of regulating these activities. If a state regulates both capital expenditures and rates of payment or reimbursement for health care services through a central, single state agency, its allotment would be increased by 25%.

WASHINGTON: In a statement in the Feb 28 issue of the *Federal Register* the Bureau of Motor Carrier Safety closed the docket on a proposal by the Idaho Association of Chiropractors, which would have allowed chiropractors to perform examinations of interstate motor carrier drivers. The Bureau said, "It would be unwise to accept, as fulfilling the requirements of periodic medical examination, an examination of a driver performed by a chiropractor." This conclusion was influenced, in part, by a DHEW study listing the shortcomings of chiropractic education, the Bureau said. The TMA had filed a brief with the Department of Transportation in opposition to the proposal.

WASHINGTON: Rep Richard H. Fulton (D-Tenn) has introduced a bill which would replace the usual and customary charge for Medicare, Medicaid payment with a statewide fee schedule. Physicians would not be required to participate.

WASHINGTON: DHEW has asked the House Subcommittee on Labor, Health, Education and Welfare to provide $25,000,000 for health maintenance or organization feasibility planning and development activities for the remainder of fiscal 1974. Testifying on the supplemental appropriation request for 1974, DHEW witnesses noted that the $25,000,000 was the full amount authorized. For a revolving loan fund, however, DHEW is asking $50,000,000 for the remainder of fiscal 74 and fiscal 75 against an authorization of $75,000,000.

WASHINGTON: HR 12684 and S 2970 are the Nixon Administration's proposed National Health Insurance Program. The Program has three parts: 1) an Employee Comprehensive Health Insurance Plan would be established for the employed; 2) an "assisted health plan" would be developed for the unemployed and low income groups; and 3) Medicare would be amended and expanded to conform with the benefits of the other two programs. Proposed benefits include hospital care, inpatient and outpatient physician care, drugs, laboratory tests and x-rays, medical devices, ambulance services, and ancillary health care. Coverage would be for all illnesses and conditions, including mental illness, alcoholism and drug addiction. In addition to other benefits, children would be eligible to receive preventive care at age six, eye and hearing examinations, and regular dental care to age 13. Catastrophic coverage would carry with it a maximum annual deduction of $1,500 per family. Enrollment in these programs would be

voluntary.

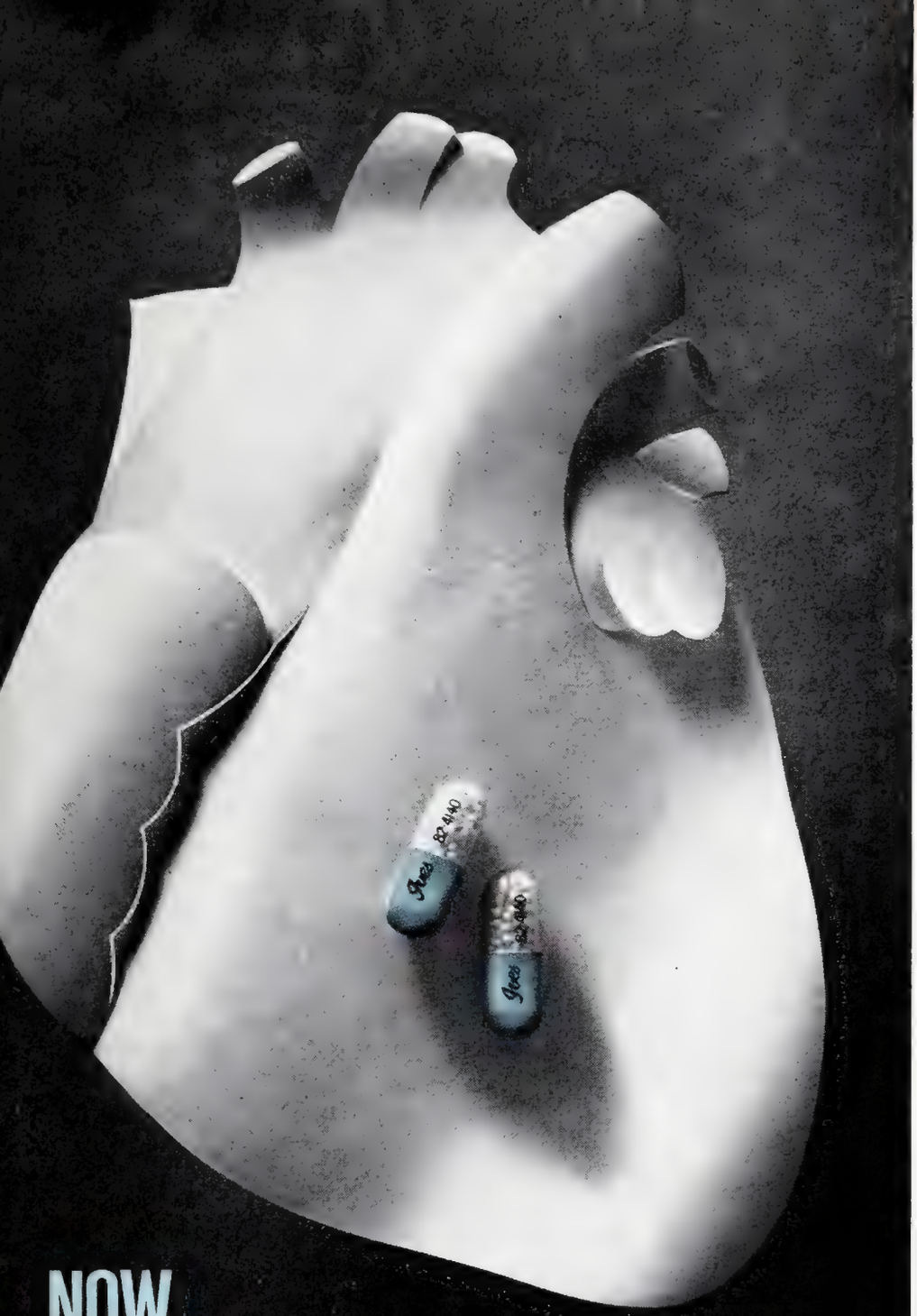
The employee plan specifies that the employer would pay 65% of the premium during the first three years, 75% thereafter. The covered employee, in addition to his portion of the premium, would be responsible for the first $150 each year in medical costs and $50 in drug costs. After the deductibles have been met, the employee would pay 25% of the bills up to the maximum of $1500 at which point the catastrophic coverage would take over. The assisted medical plan, which would replace Medicaid, carries an estimated federal cost of $6.9 billion with an additional $1 billion to be paid by the states. The present Medicare program would be modified to include the benefits in the other two plans. Medicare beneficiaries would pay the first $100 of medical costs and $50 of drug costs each year with an annual $750 ceiling on out-of-pocket expenses.

The bill has four control measures. 1) A requirement that coverage by an HMO be offered to enrollees whenever and wherever such facilities become operational; 2) services rendered under the program would be reviewed by PSROs; 3) a state review of health facility constructions to prevent overbuilding of hospitals and other care facilities; and 4) states would review insurance companies for the purpose of approving specific plans, overseeing rates, insuring adequate disclosure and take such other steps as are appropriate. For health care providers, the states would "assure fair reimbursement for physicians' services, drugs, and institutional providers, including a prospective reimbursement system for hospitals."

HR 12684 is sponsored by Rep Wilbur Mills (D-Ark) and Rep Herman T. Schneebeli (R-Pa). Sen Robert W. Packwood (R-Ore) introduced S 2970.

WASHINGTON: Sen Phillip A. Hart (D-Mich) has announced plans to have his Antitrust and Monopoly Subcommittee look into the effectiveness of competition in holding down health care costs with particular emphasis on HMOs.

WASHINGTON: The House has passed HR 2, the Employee Benefit Security Act of 1974, which would raise the Keogh Plan contributions to 15% of income or $7,500. The bill further provides that members of professional corporations could set aside sufficient amounts to yield a pension equal to 100% of the individual's three high years of income (maximum of $75,000 per year). A conference committee will now adjust the differences in the House and Senate bills.



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Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.

Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur. In patients with functional or organic gastrointestinal hypermotility or malabsorption syndrome, it is suggested that either the ISORDIL 5 mg. or 10 mg. Oral tablets or sublingual tablets be the preferred therapy. The reason for this is that a few patients have reported passing partially dissolved ISORDIL TEMBIDS tablets in their stools. This phenomenon is believed to be on the basis of physiological variability and to reflect rapid gastrointestinal transit of the sustained action tablet. TEMBIDS SHOULD NOT BE CHEWED.

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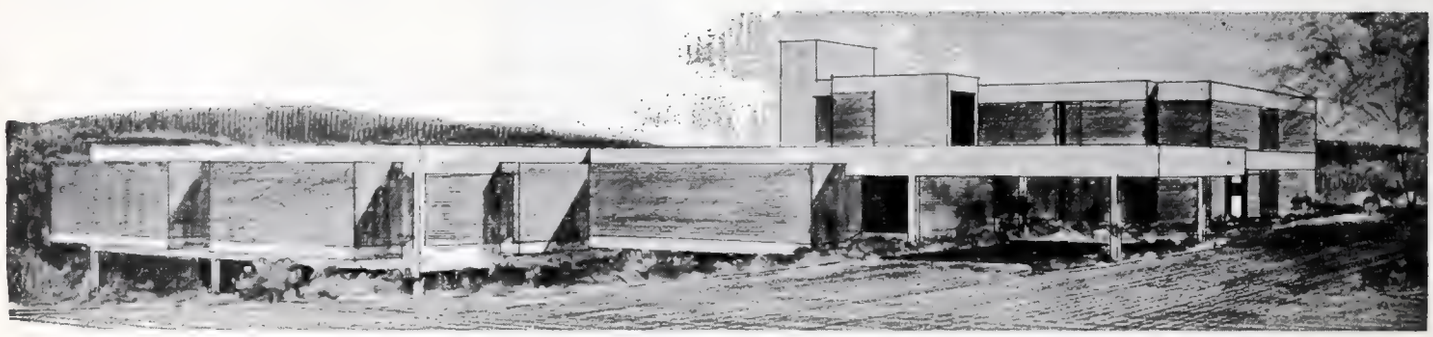

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A Comprehensive Therapeutic Program for the G.I. patient

Enarax® (oxyphencyclimine HCl/hydroxyzine HCl) Tablets, as adjunctive therapy, can help relieve a wide range of gastrointestinal disorders—and their accompanying anxiety.* Without cooperation of the patient, however, no medicinal regimen can succeed entirely... an understanding of the condition, the factors involved in its development, and the proper approach to self-care are often basic to successful therapy.

To help save some of your valuable time in providing this background information, this specially designed G.I. Patient Relief Kit is available on request—a valuable addition to your overall therapeutic program.

In addition to a complimentary introductory prescription for **Enarax** Tablets, this handsome kit contains the information and appropriate stimuli to start the patient on a program of proper self-care:

Patient Information Booklet, "You and Your Digestive System"—easy-to-swallow advice on how to take care of the gastrointestinal tract, including diet information.

Sanka® **Decaffeinated Coffee** sample packets to provide an alternative to regular coffee with caffeine.

Gelusil® **Liquid** to help relieve heartburn, dyspepsia, gas, and flatulence between meals.

Money-saving coupon for future purchase.

You can obtain a quantity of these kits packaged for easy office storage by filling out the attached Prepaid Business Reply Card.

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A division of Pfizer Pharmaceuticals
New York, New York 10017

*Based on a review of this drug by the National Academy of Sciences—National Research Council, F.D.A. has classified this indication as "possibly" effective.

Please see following page for prescribing information, including adverse reactions, contraindications and warnings.

A Comprehensive Therapeutic Program for the G.I. patient

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New York, New York 10017

*Based on a review of this drug by the National Academy of Sciences—National Research Council, F.D.A. has classified this indication as "possibly" effective.

includ

Please send me six G.I. Patient Relief Kits complete with complimentary prescription forms for an introductory supply of

Enarax® tablets
(oxyphencyclimine HCl/hydroxyzine HCl)

Name _____
(Please print or type)

ME# _____

Address _____

City _____

State _____ Zip _____

_____
Physician's Signature

To help control G.I. distress/calm psychic tension*

Enarax® tablets

(oxyphencyclimine HCl/hydroxyzine HCl)

- Combination provides for effective 12-hours antispasmodic/anticholinergic action of oxyphencyclimine with the calming action of Atarax® (hydroxyzine HCl).
- As adjunctive therapy, helps relieve a wide range of gastrointestinal disorders, and their accompanying anxiety—simultaneously. However, it should be used with caution in patients with ulcerative colitis.
- Avoids the confusion and expense of two medication schedules.
- Convenient b.i.d. dosage.
- Individualized therapy—Enarax® 5 (oxyphencyclimine HCl 5 mg./hydroxyzine HCl 25 mg.). Enarax® 10 (oxyphencyclimine HCl 10 mg./hydroxyzine HCl 25 mg.).
- Usually well tolerated; drowsiness or blurred vision may occur.

More detailed professional information available on request.

SEE REVERSE FOR FREE OFFER.

Composition

Each Enarax 5 tablet contains:

oxyphencyclimine HCl ..... 5 mg.
hydroxyzine HCl N.F. (Atarax)® ..... 25 mg.

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Enarax may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery, or perform hazardous work while taking this drug.

Precautions. Anticholinergics should be used with caution in patients with:

autonomic neuropathy,

hepatic or renal disease,

ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon.

hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension and nonobstructing prostatic hypertrophy; hiatal hernia associated with reflux esophagitis, since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis).

The use of this drug in the presence of complication of biliary tract disease should not be relied upon.

Tachycardia should be thoroughly investigated before giving anticholinergic (atropine-like) drugs since they may increase the heart rate.

With overdosage, a curare-like action may occur.

Adverse Reactions. As with other anticholinergics, oxyphencyclimine HCl produces certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these.

Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis, dilatation of the pupil; cycloplegia, increased ocular tension; loss of taste; headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestation; some degree of mental confusion and/or excitement especially in elderly persons.

Decreased sweating is another adverse reaction that may occur. It should be noted that adrenergic innervation of the eccrine sweat glands on the palms and soles make complete control of sweating impossible. An end point of complete anhidrosis cannot occur because large doses of drug would be required, and this would produce severe side effects from parasympathetic paralysis.

Side effects which occasionally occur with hydroxyzine HCl (Atarax)® are drowsiness, xerostomia, and, at extremely high doses, involuntary motor activity, all of which may be controlled by reduction of the dosage or discontinuation of the medication.

Dosage and Administration. The recommended adult dose is usually one Enarax 5 or one Enarax 10 tablet two times a day or three times a day, depending on individual response. Proper diet and antacids should be used where indicated as concomitant therapy. The safe use of Enarax in children has not been established; therefore, the drug should not be used in children.

Drug Interactions. The potentiating action of hydroxyzine must be considered when the drug is used in combination with central nervous system depressants.

How Supplied. Enarax 5 is available as white scored tablets in bottles of 60. Enarax 10 is available as black and white scored tablets in bottles of 60.

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To help control G.I. distress/calm psychic tension*

Enarax® tablets

(oxyphencyclimine HCl/hydroxyzine HCl)

- Combination provides for effective 12-hours antispasmodic/anticholinergic action of oxyphencyclimine with the calming action of Atarax® (hydroxyzine HCl).
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More detailed professional information available on request.

SEE REVERSE FOR FREE OFFER.

Composition

Each Enarax 5 tablet contains:
oxyphencyclimine HCl ..... 5 mg.
hydroxyzine HCl N.F. (Atarax)® ..... 25 mg.
Each Enarax 10 tablet contains:
oxyphencyclimine HCl ..... 10 mg.
hydroxyzine HCl N.F. (Atarax)® ..... 25 mg.

Description. Enarax is a combination of oxyphencyclimine HCl and hydroxyzine HCl. Oxyphencyclimine HCl is a crystalline substance characterized by the chemical formula: (1-methyl-1,4,5,6 tetrahydro-2-pyrimidyl-methyl alpha-cyclohexyl-alpha-phenylglycolate hydrochloride). It is soluble and stable in aqueous solutions.

Hydroxyzine HCl is designated chemically as 1-(p-chlorobenzhydryl)-4-[2-(2-hydroxyethoxy)-ethyl] piperazine dihydrochloride.

Actions. Oxyphencyclimine HCl provides long acting suppression of gastric secretion through its anticholinergic action. The mechanism of this action is the inhibition of acetylcholine at postganglionic cholinergic sites in structures innervated by postganglionic parasympathetic nerves and on smooth muscle not so innervated but responsive to acetylcholine.

Hydroxyzine HCl, marketed under the trade name, Atarax®, has been shown clinically to be an effective anti-anxiety agent. It induces a calming effect in anxious, tense individuals without impairing mental alertness. It is not a cortical depressant, but its action may be due to a suppression of activity on certain key regions of the subcortical area of the central nervous system.

***Indications.** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Possibly Effective: As adjunctive therapy in peptic ulcer; irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, functional gastrointestinal disorders); functional diarrhea; drug induced diarrhea; ulcerative colitis, and urinary bladder spasm and ureteral spasm (i.e. smooth muscle spasm).

Final classification of these less than effective indications requires further investigation.

Contraindications. Because of its anticholinergic activity, Enarax is contraindicated in the presence of glaucoma, obstructive uropathy (i.e. bladder neck obstruction due to prostatic hypertrophy), obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis, etc.); paralytic ileus; intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis.

Warnings. Hydroxyzine, when administered to the pregnant mouse, rat, and rabbit induced fetal abnormalities in the rat at doses substantially above the human therapeutic range. Clinical data in human beings are inadequate to establish safety in early pregnancy. Until such data are available, hydroxyzine-containing drugs are not advised in early pregnancy.

In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heatstroke due to decreased sweating).

Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful.

Enarax may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery, or perform hazardous work while taking this drug.

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hepatic or renal disease,
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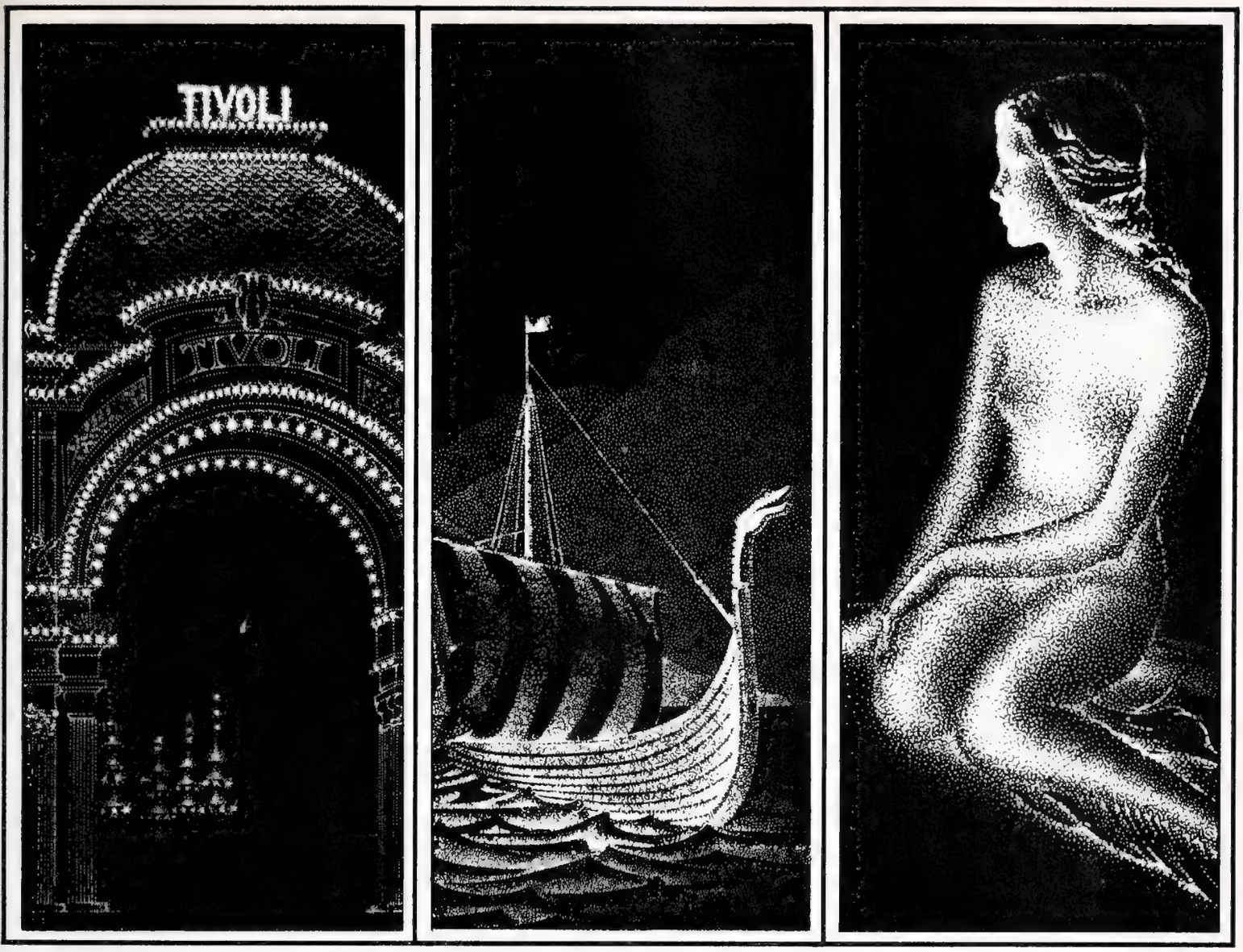
LE-879 Printed in U.S.A. Issued November 1973



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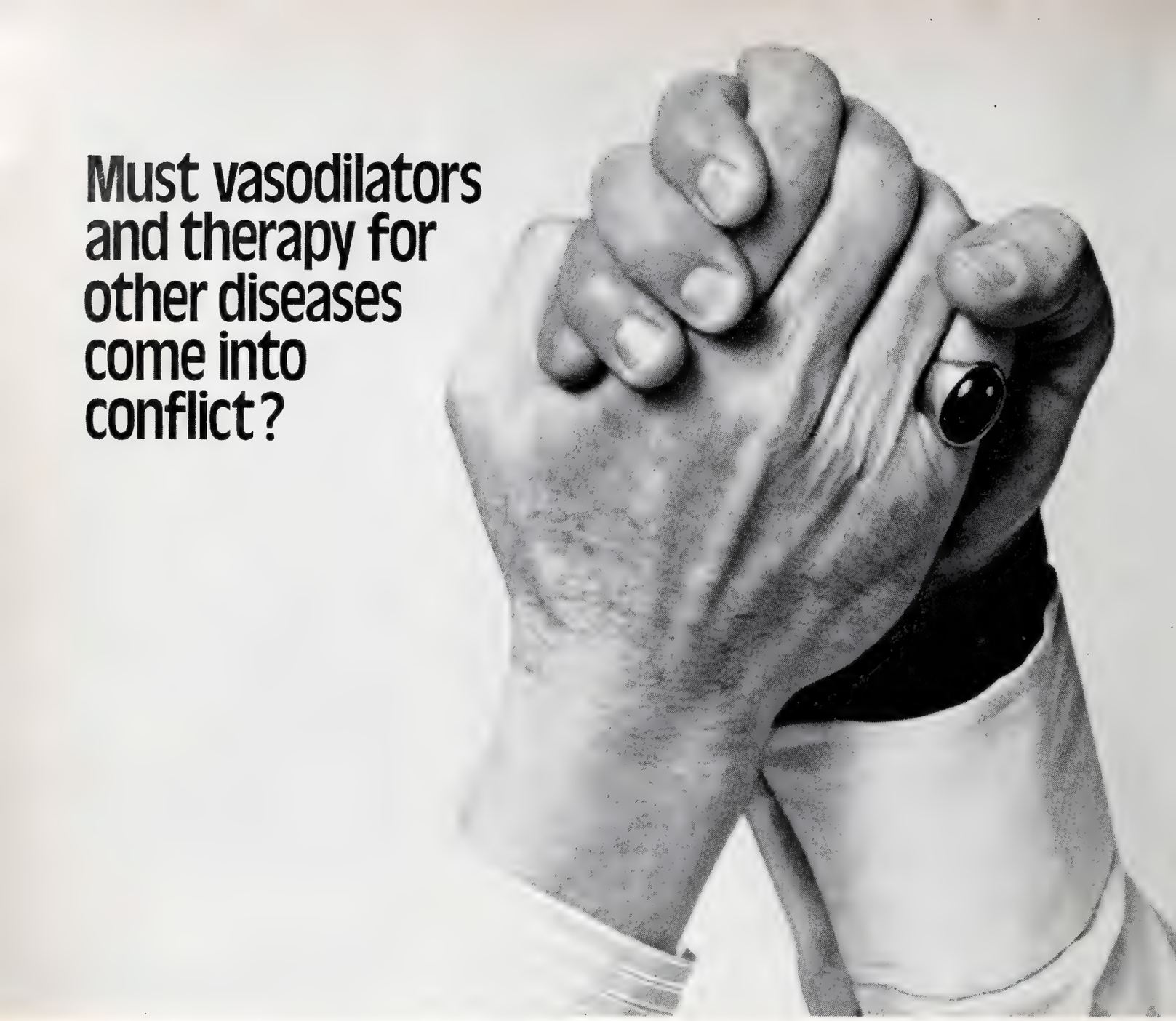
Must vasodilators and therapy for other diseases come into conflict?



not if the vasodilator is

VASODILAN®
(ISOXSUPRINE HCl)

the compatible vasodilator... no treatment conflicts reported

The cerebral or peripheral vascular disease patient often has coexisting disease[1] which calls for another drug along with his vasodilator. It may be a hypoglycemic, miotic, antihypertensive, diuretic, anticoagulant, corticosteroid, or coronary vasodilator.

Vasodilan is not incompatible with any of these drugs—no treatment conflict has been reported. And, unlike other vasodilators, Vasodilan has not been reported to affect carbohydrate metabolism, liver function, or intraocular pressure—or to complicate treatment of diabetes, hypertension, peptic ulcer, glaucoma, or liver disease.

In fact, there are no known contraindications to the use of Vasodilan in recommended oral doses, other than that it should not be given in the presence of frank arterial bleeding or immediately postpartum.

1. Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500 and Unit Dose.

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Mead Johnson LABORATORIES

CONTINUING EDUCATION COURSES

MAY

Biomedical Sciences: The Institute for the Medical Humanities of The University of Texas Medical Branch at Galveston announces the first trans-disciplinary symposium on the interface of philosophy and medicine, "Evaluation and Explanation in the Biomedical Sciences." It will convene May 9-11 and is composed of six sessions. Program announcements and additional information may be obtained from Dr. H Tristram Engelhardt, Jr, UT Medical Branch, Galveston 77550.

Cardiography: Electrocardiographic Interpretation of Cardiac Arrhythmias is a program designed to meet the needs for an intensive review for those physicians who employ electrocardiograms in the diagnosis and management of their patients. The course is being presented by The University of Texas Health Science Center at Houston and will be given on board the new M/S Southward, a 17,000 ton ship of the Norwegian Caribbean Lines. The cruise will depart from Galveston May 19 and return May 26. The program is acceptable for 20 prescribed hours by the AAFP and Category I, AMA Physician's Recognition Award. Contact: Harvey Travel, Inc, PO Box 13376, Houston 77019.

Digestive Diseases: Five societies representing physicians and surgeons in the gastroenterological sciences will join together in a week-long series of meetings and study sessions in San Francisco May 19-25. The meetings will include two postgraduate courses: Peptic Ulcer Disease sponsored by the American Gastroenterological Association, and Gastrointestinal Endoscopy, sponsored by the American Society for Gastrointestinal Endoscopy. The Society for Surgery of the Alimentary Tract will hold scientific sessions on May 21. On May 22, registrants will attend sessions sponsored by the Society for Surgery of the Alimentary Tract, American Society for Gastrointestinal Endoscopy and the Gastroenterology Research Group. The Gastroenterology Research Group will join with the American Association for the Study of Liver Diseases on May 23 for a symposium. On May 24-25, the American Gastroenterological Association will present clinical symposia and a half-day plenary session. Separate registration fees will be charged for the two postgraduate courses and for the four-and-one-half days of scientific meetings. Contact: Charles B Slack, 6900 Grove Rd, Thorofare, NJ 08086.

Non-narcotic Drug Abuse: A program in the treatment of non-narcotic drug abuse is to be presented in Houston, May 20-23, at the Marriott Motor Hotel. Sponsored by the Institute of Clinical Toxicology, Houston, it will emphasize the drugs that are abused, the patients who abuse them, and treatment techniques in current use. Contact: Dr. Eric G Comstock, Institute of Clinical Toxicology, PO Box 2565, Houston 77001.

Nutrition: The A Webb Roberts Center for Continuing Education and Greater Dallas Community Nutrition Council are cosponsoring a postgraduate course in nutrition May 16-18 at Beasley Auditorium, Baylor University Medical Center, Dallas. Featured speakers on the program are Dr. William J Darby, president of Nutrition Foundation, New York, and professor of biochemistry, Vanderbilt University, Nashville; Lester Matthews, PhD, professor, Baylor College of Dentistry, Houston; Dr. Buford L Nichols, chief of section on nutrition and gastroenterology, Baylor College of Medicine, Houston; Donald Wiggans, PhD, professor of biochemistry, The University of Texas Health Science Center, Dallas; and Dr. Charles Walker, VA Hospital, Dallas. The course is accredited for Category I, AMA Physician's Recognition Award. Contact: Dr. Robert Vaughan, A Webb Roberts Center, 3500 Gaston Ave, Dallas 75246.

Pediatrics: Pediatric radiology, pediatric surgery, and general pediatrics are topics to be covered during the postgraduate pediatrics course being sponsored by The University of Texas Health Science Center at San Antonio May 4-5. The course will be held at The University of Texas Medical School at San Antonio and is accredited for 8 hours AAFP and Category I, AMA Physician's Recognition Award. No fee will be charged. Contact: Dr. Howard A Britton, Clinical Professor, Dept of Pediatrics, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284.

Pediatrics: A pediatric seminar is being sponsored by the A Webb Roberts Center for Continuing Education May 22 at Beasley Auditorium, Baylor University Medical Center, Dallas. Dr. Sam Spector, chairman and professor, department of pediatrics, the University of Chicago Medical School, will speak on neonatal metabolism. Credit for category I, AMA Physician's Recognition Award, will be given. Contact: Dr. Robert Vaughan, A Webb Roberts Center, 3500 Gaston Ave, Dallas 75246.

Radiology: A refresher course in diagnostic radiological physics and radiation biology for those physicians who will be taking the American Board of Radiology exam is being offered May 29-31 at Marriott Hotel, Dallas. Cosponsors are The University of Texas Southwestern Medical School at Dallas and A Webb Roberts Center for Continuing Education. The course is acceptable for Category I, AMA Physician's Recognition Award. Contact: Dr. Robert Vaughan, A Webb Roberts Center, 3500 Gaston Ave, Dallas 75246.

Renology: Renal problems most frequently encountered by the family physician, internist, and pediatrician will be emphasized in the course, "Renology—Current Trends in Diagnosis and Therapy," being sponsored by The University of Texas Health Science Center at San Antonio. The course will be held at La Posada Motor Hotel, Laredo, May 25-26. Also included in the program will be evaluation of patients with proteinuria, management of chronic renal insufficiency, and treatment of urinary tract infections. Indications for renal biopsy and for special treatment tech-

niques will be reviewed. Fee: $65. Credit: 10 hours AAFP and Category I, AMA Physician's Recognition Award. Contact: Dr. Marvin Forland, Professor and Head, Div of Renal Disease, Dept of Medicine, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284.

Sexual Counseling: Two therapists with experience in the treatment of sexual disorders will be featured during a workshop in sexual counseling, sponsored by The University of Texas Health Science Center at San Antonio, May 4, in San Antonio. Focus will be on the clinical management and successful counseling techniques used for clients with impotence, frigidity, and sexual incompatibility. Fee: $20; credit: 6 hours AAFP, and Category I, AMA Physician's Recognition Award. Contact: Dr. Harry Croft, Clinical Assistant Professor, Dept of Psychiatry, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284.

JUNE

Cardiology: The American Heart Association, Texas Affiliate, presents its 1974 Annual Scientific Sessions June 21 at the Sheraton-Fort Worth Hotel. The morning session will be a therapy seminar on cardiac drugs; the afternoon session will include the "Alfred W Harris Memorial Lecture", stress testing for coronary artery diseases, and correlation of stress testing and coronary angiography. Registration fee is $15 for members of American Heart Association and $20 for nonmembers. The course is approved for 6 elective hours AAFP. Contact: American Heart Association, PO Box 9928, Austin 78766.

Emergency Medicine: A two-day clinical symposium for physicians on "Management of Life-Threatening Problems in the Emergency Department" will be held at the Hilton Inn, Tulsa, June 6-7. The meeting will be sponsored by St Francis Hospital, Tulsa; American College of Surgeons Oklahoma Trauma Committee; Oklahoma Division of American Trauma Society; and Oklahoma Trauma Research Society. Enrollment fee is $75, which includes luncheons and reception. Contact: Oklahoma Trauma Research Society, Suite 811, 6465 S Yale, Tulsa 74136.

Family Practice: A family practice review is being sponsored by the University of Colorado School of Medicine June 10-15, at the YMCA Conference Center, Estes Park, Colo. The session will present reviews of six major fields of practice: medicine, pediatrics, dermatology, surgery and trauma, obstetrics and gynecology, and psychiatry. Registration fee is $150, and the courses are approved for prescribed credit by the AAFP. Contact: The Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 E 9th Ave, Denver 80220.

Statistics: The 16th Annual Graduate Summer Session of Statistics in the Health Sciences will be held at The University of Texas School of Public Health, Houston, June 20-Aug 2. Course offerings will cover elementary, intermediate, and advanced biostatistics; statistical methods in health services research, environmental health, population planning, and disease control; sampling human populations; design of experiments; biomathematics; demography; and operations research. The Summer Session is supported by funds from the United States Public Health Service. Contact: Summer Session of Statistics, The University of Texas School of Public Health, PO Box 20186, Astrodome Station, Houston 77025.

JULY

Dermal Pathology: The 16th Annual Postgraduate Course in Dermal Pathology is being sponsored by The University of Texas Health Science Center at Houston and The University of Texas System Cancer Center M D Anderson Hospital and Tumor Institute at Houston Aug 19-23 in Houston. Emphasis will be given to a review of the basic concepts of dermal pathology, including histology and anatomy, electron microscopy, histochemistry, inflammatory dermatoses, granulomatous dermatoses, reticulo-endothelial and alterative dermatoses and nevi and neoplasms. Contact: Office of the Director, UT Health Science Center at Houston, Division of Continuing Education, PO Box 20367, Houston 77025.

Medical Electronics: A seminar on clinical applications of medical electronics is being sponsored by Texas Tech University School of Medicine, and Texas Tech University College of Engineering, Lubbock, Aug 2-4. Enrollment is limited to 50 participants. Contact: Dr. Orene W Peddicord, Coordinator, Continuing Medical Education, Texas Tech University School of Medicine, PO Box 4569, Lubbock 79409.

Oncology: The University of Texas System Cancer Center M D Anderson Hospital and Tumor Institute at Houston in cooperation with The University of Texas Health Science Center at Houston will present "Current Trends in Clinical Research Technique" Aug 9-10 in the auditorium of M D Anderson Hospital and Tumor Institute, Houston. This program will briefly review established techniques of clinical research and delve into new developments in clinical research experiment design, systems for accurate and objective data collection and review, biostatistical methods for clinical research, computer technology in clinical research, and the importance of identifying variables in investigation of the clinical response of a group of patients and the response of a single patient to a specific therapy. Contact: Office of the Director, UT Health Science Center at Houston, Division of Continuing Education, PO Box 20367, Houston 77025.

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Information for authors

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each paper is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material.

Manuscripts should be typed double-spaced with ample margins on firm paper. Carbons are unacceptable, but the author should keep a copy.

The *title* should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

The *author's names* and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

The *text* should be narrative with complete sentences, *few abbreviations*, and logical subheading. For *spelling and usage* the editors follow "Dorland's Illustrated Medical Dictionary," 24th edition, and "Webster's Third New International Dictionary, Unabridged." *Quotations* must give credit to both author and source. A concise *introductory summary* is required.

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, top, author's name, and title of article in brief. *Legends* should be in complete sentences, numbered, and typed on a separate sheet. *Color illustrations* are authorized if they are of special value.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Permission should be obtained from the publishers and the authors for any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited in the bibliography. Copies of permission letters should be submitted with the manuscript.

All material is subject to *editing*, but authors receive typescripts to check before publication. Prompt return of typescripts to *Texas Medicine* office avoids delay in publication. After the article is sent to the printer, only minimal revision may be made.

Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Editorials should be prepared in the same general manner, and should be written in clear, concise language. They should be 300-500 words in length (about two to three pages typed with double spacing.)

Contributions to the news section should be sent to the Editorial Offices, 1801 N. Lamar Blvd., Austin 78701, by the 5th of the month preceding the month of publication.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Contributions, previously unpublished, are welcomed for review. News and other items should be sent to the Editorial Offices by the 5th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Scientific Articles are reviewed by technical and specialist consultants and are selected for publication in Texas Medicine by the Scientific Publication Committee, which is appointed by the Board of Publication. Editorials and other articles are subject to review by officers of the Texas Medical Association, appropriate expert and technical consultants, and representatives of county medical societies when in their purview.

Scientific Publication Committee: Joseph M. Abell, Jr., MD, Austin, Chairman; Robert Askew, MD, Austin, Vice-Chairman; Ronald P. Boren, MD, Austin; Ernest C. Butler, MD, Austin; Jesse D. Cone, MD, Odessa; C. W. Daeschner, MD, Galveston; George A. Gates, MD, San Antonio; Stanton W. Glazener, MD, Austin; R. Maurice Hood, MD, Lubbock; Joseph Lancaster, MD, Austin; Paul C. Peters, MD, Dallas; Richard S. Ruiz, MD, Houston; John P. Schneider, MD, Austin; H. Irving Schweppe, Jr., MD, Houston; Theodore P. Votteler, MD, Dallas.

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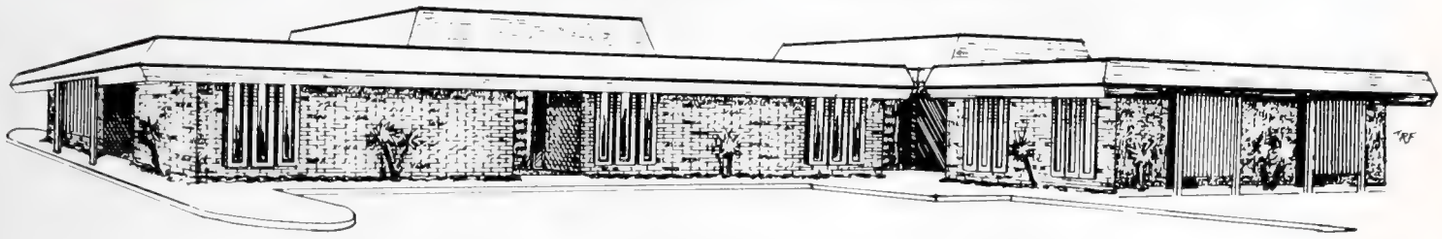

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Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

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pura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

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COMING MEETINGS

TEXAS MEDICAL ASSOCIATION

The 107th Annual Session of the Texas Medical Association will be held May 9-12, 1974, in Houston. The Shamrock Hilton Hotel has been designated scientific sessions headquarters; the Astroworld Hotel has been designated business sessions headquarters; and the Warwick Hotel will be headquarters for the Woman's Auxiliary. In conjunction with the programs of the scientific sections and related organizations, special programs to be held are conference on school health; pediatric cardiology program; renal disease panel; symposium on cancer; symposium on cardiovascular diseases; symposium on community emergency medical services; symposium on geriatrics; symposium on maternal health; symposium on obesity; symposium on pediatric nutrition; symposium on sports medicine; and Texas Academy of Family Physicians seminar. There is no registration fee for members of TMA, participants in the program, interns, residents, or individuals in allied health disciplines, such as medical students, medical assistants, nurses, and technicians. A registration fee of $10 is charged for all other nonmember physicians.

Contact: C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

AMERICAN CANCER SOCIETY, TEXAS DIVISION

American Cancer Society, Texas Division, and the Committee on Cancer of the Texas Medical Association, will cosponsor a symposium on cancer May 9 in the Emerald Room of the Shamrock Hilton Hotel, Houston. Topics to be covered in the program include high risk group for breast cancer; chemotherapy of cancer of the breast; approaches to immunotherapy in man; and immunological approaches to the management of cutaneous tumors. A panel discussion on lumpectomy and a movie on melanoma will also be presented.

Contact: Curt W Reimann, PO Box 9863, Austin 78766, Exec Dir.

AMERICAN CANCER SOCIETY

The American Cancer Society is presenting its National Conference on Childhood Cancer May 16-18 at the Fairmont Hotel, Dallas. Purpose of this conference is to alert the medical community to the progress being made in the diagnosis and treatment of childhood cancer and to emphasize the need for early diagnosis and the importance of prompt treatment by a team of medical specialists and allied health personnel. Pre-registration is requested, and there is no registration fee.

Contact: American Cancer Society's National Conference on Childhood Cancer, 219 E 42nd St, New York 10017.

CURRENT MEETINGS IN TEXAS

AMERICAN PSYCHIATRIC ASSOCIATION, TEXAS DISTRICT BRANCH, will meet May 11 at the Shamrock Hilton Hotel, Houston. Guest speakers for the program are Dr. Donald G Langsley, Davis, Calif; Dr. Ewald W Busse, Durham, NC; and Dr. James A Hall, Dallas. Dr. Langsley will speak on marital counseling and crisis intervention. Dr. Busse's topics include practical applications of psychiatric principles to the aging patient and rehabilitative measures for the psychiatrically disabled older patient. Dr. Hall will discuss the use of dream material in psychotherapy. Contact: Mrs. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

CONFERENCE OF CITY AND COUNTY HEALTH OFFICERS, held in conjunction with Texas Medical Association's Section on Public Health, will present its program at the Shamrock Hilton Hotel, Houston, May 10. Dr. Herschel E Griffin, Pittsburgh, Pa, guest speaker, will talk on health productivity and the health professional, and public health influence on environmental standards. Contact: Dr. J E Peavy, Commissioner of Health, Texas State Dept of Health, 1100 W 49th St, Austin 78756.

TEXAS AIR-MEDICS ASSOCIATION and **TEXAS CHAPTER, FLYING PHYSICIANS ASSOCIATION,** will hold a joint meeting at the Shamrock Hilton Hotel, Houston, May 9. Program topics will include aircraft accidents in the southwest region during 1973; air traffic medicine; role of the flying physician in the community; airline medical research; and new FAA regulations. A round table discussion and film will be presented during the afternoon session. Contact: Dr. C F Miller, PO Box 1338, Waco 76703, Sec.

TEXAS ASSOCIATION OF NEUROLOGICAL SURGEONS is presenting its annual meeting May 11 at the Holiday Inn—Medical Center, Houston. Featured on the program are Dr. I Melbourne Greenberg, Freeport, NY, speaking on current socioeconomics of medicine as they affect neurosurgery; Dr. W Frederick Lucas, Indianapolis, Ind, PSRO—both sides of the reality; Dr. Milam E Leavens, Houston, transsphenoidal hypophysectomy; and Dr. William R Bernell, Fort Worth, cryohypophysectomy. Contact: Dr. Robert C L Robertson, 2210 Maroneal, Houston 77025, Pres.

For other courses and symposiums, see Continuing Education Courses, pp 35-36.

TEXAS DERMATOLOGICAL SOCIETY will meet in conjunction with the **MEXICAN SOCIETY OF DERMATOLOGIA** at the Jesse H Jones Library Building, Houston, May 10-12. Special guest speaker is Dr. Morris Waisman, Tampa, Fla, who will speak on epidermodysplasia verruciformis: a current appraisal. Contact: Dr. Don W Owens, 6624 Fannin, Houston 77025, Prog Chrmn.

TEXAS DIABETES ASSOCIATION is sponsoring its annual meeting May 10-11 at the Shamrock Hilton Hotel, Houston. The program will begin with a continental breakfast presentation by Dr. Buris R Boshell, Birmingham, Ala. Topics to be presented during the meeting include fat metabolism in diabetes; diabetic retinopathy, diagnosis and management; computer assisted care of diabetics; normal insulin sensitivity in mild diabetics; diabetes therapy, present and future; and the case for rigid control of blood sugar in diabetic therapy. Contact: Dr. Albert Hendler, 9239 Garland Rd, Dallas 75218, Pres.

TEXAS INDUSTRIAL MEDICAL ASSOCIATION will meet May 10 in Salon C of the Marriott Motor Hotel, Houston. Dr. Howard S VanOrdstrand, Cleveland, Ohio, and Dr. Arthur C Beall, Jr, Houston, will speak on occupational lung diseases and evaluation and management of chest injuries. Contact: Dr. John R Venable, Dow Chemical Co, Freeport 77541, Sec.

TEXAS OPHTHALMOLOGICAL ASSOCIATION, in conjunction with the Texas Medical Association, will meet May 9-11 at the Shamrock Hilton Hotel, Houston. Topics to be covered in the program include replacement of extruded orbital implant; automatic refraction; diagnosis and treatment of migraine headaches; use of cranioplastic in ophthalmic plastic surgery; orbital fractures; and glaucoma trabeculectomy for open angle. A symposium on automatic refractors will be held the afternoon of May 10. The Texas Ophthalmological Association is also sponsoring a tour to Europe May 12-31 which will include the XXIInd International Congress of Ophthalmology in Paris, France. Contact: Dr. C A Struve, PO Box 6374, Corpus Christi 78404, Sec.

TEXAS ORTHOPAEDIC ASSOCIATION's annual meeting will be held May 11 at the Astroworld Hotel, Houston. Program topics will include problem dislocations of the hand; cineradiography in fractures, dislocations, and subluxation of the carpus; pins and plaster treatment of comminuted fractures of the distal radius; posterior dislocations of the shoulder; surgical management of severe spine fractures; subtalar dislocations; and acromioclavicular injuries. Contact: Dr. John A Murray, 5401 Caroline, Houston 77004, Prog Chrmn.

TEXAS OTOLARYNGOLOGICAL ASSOCIATION's annual meeting is being held May 10-11 at the Shamrock Hilton Hotel. Guest speakers are Dr. G O'Neil Proud, Kansas City, Kan; Dr. M Stuart Strong, Boston; and Dr. F Blair Simmons, Stanford, Calif. The program will include discussions on laser surgery in the larynx; idiopathic sudden hearing loss; hearing screening in newborns; otological surgical decisions; and benign lesions of the oral cavity. Curbstone consultations will be held both Friday and Saturday evenings. Contact: Dr. John W Youngblood, Jr, 505 Medical Park Tower, Austin 78705, Sec.

TEXAS PROCTOLOGIC SOCIETY will hold its annual meeting May 9 in the Belvedere Room of the Shamrock Hilton Hotel, Houston. The program will include discussions on colonoscope—indications and technique; cryosurgery for hemorrhoids; new practical concepts of diverticular diseases; postpartum hemorrhoidectomy—when and how; clinical applications of anal-rectal anatomy; and injection treatment of hemorrhoids. Contact: Dr. W A Hibbert, 4210 Medical Pkwy, Austin 78705, Pres.

TEXAS SOCIETY OF ANESTHESIOLOGISTS will meet May 11-12 at the Shamrock Hilton Hotel, Houston. The program for the scientific meeting will begin at 1 p.m. with a panel discussion on how PSRO will affect the anesthesiologists. Other topics on the program are the prevention of medical malpractice suits; electricity in the operating area—friend or foe; clinical experience with auto-transfusion; renal function as modified by anesthetic and cardiovascular drugs; and hypertension, anesthesia-cardiovascular surgery. Contact: Dr. Cecil R Glass, 2525 Calder Ave, Beaumont 77702, Sec.

TEXAS SOCIETY OF PATHOLOGISTS will meet May 11 at the Shamrock Hilton Hotel, Houston. Program topics include blood component therapy, 1974; prevention, diagnosis, and management of hemolytic disease of newborn; record keeping in a community hospital blood bank; leukocyte transfusions; and coagulation problems associated with massive transfusion. A panel discussion will be held in the afternoon, and curbstone consultations in the evening. Contact: Dr. John A Webb, 704 Medical Towers, Houston 77025, Sec.

TEXAS SOCIETY OF PLASTIC SURGEONS' annual meeting will be presented May 10-11 at the Marriott Motor Hotel, Houston. A continental breakfast presentation on current concepts in burn management features Dr. John E Hoopes of Baltimore. He will also speak on the role and scope of plastic surgery and malignant benign lesions—unsolved problems. Contact: Dr. Jeff Moore, PO Box 3755, Amarillo 79106, Sec.

UNIVERSITY ASSOCIATION FOR EMERGENCY MEDICAL SERVICES has scheduled its annual business and formal meeting May 28-June 1 at the Sheraton Dallas Hotel, Dallas. The program will consist of the "Robert H Kennedy Lectureship in Emergency Medical Care;" and two panel sessions, Emergency Medicine as a Specialty and Cardiac Telemetry. Registration fee: $60. Contact: University Association for Emergency Medical Services, PO Box 1241, East Lansing, Mich 48823.

CURRENT NATIONAL MEETINGS

AMERICAN BOARD OF FAMILY PRACTICE will give its next two-day written certification examination on Oct 19-20. It will be held in five centers geographically distributed throughout the United States. Each physician desiring to take the examination must file a completed application with the Board office prior to June 15, 1974. Information regarding the examination may be obtained by writing Dr. Nicholas J Pisacano, American Board of Family Practice, University of Kentucky Medical Center, Annex 2, Room 229, Lexington, Ky 40506, Sec.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS will meet Apr 27-May 2 at Las Vegas Convention Center, Las Vegas. Fourteen professors from throughout the United States and Canada have been invited to present current thinking on more common and important problems in the specialty. Special interest meetings will also be held with a specialist with known involvement and expertise in each subject designated to enlist the participation of persons known to be interested in the subject. Papers on current clinical and basic investigation will be presented and there will also be round table discussions. Contact: American College of Obstetricians and Gynecologists, One E Wacker Dr, Chicago 60601.

AMERICAN INDUSTRIAL HEALTH CONFERENCE, cosponsored by the Industrial Medical Association and American Association of Industrial Nurses, will meet at the Americana Hotel, Bal Harbour, Fla, Apr 28-May 2. The program will include both scientific and technical exhibits, postgraduate seminars, and workshops in selected areas of occupational medical practice. Contact: American Industrial Health Conference, 150 N Wacker Dr, Chicago 60606.

THIRD ANNUAL THYROID SYMPOSIUM, sponsored by USAF Academy Hospital, Colorado, will be conducted at the Broadmoor Hotel, Colorado Springs, May 4. The program is the third in a continuing series of symposia for the physician, emphasizing recent developments in thyroid physiology, diagnosis, and treatment. Contact: Dr. Frederick R Gydesen, Director of Nuclear Medicine, Penrose Hospital, 2215 N Cascade Ave, Colorado Springs 80907, Symposium Dir.

Calendar of Listings

■ **Denotes Texas Meetings**

MAY

AEROSPACE MEDICAL ASSOCIATION, Washington, DC, May 6-9, 1974. Dr. Merrill H Goodwin, ASMA, Washington National Airport, Washington, DC 20001, Exec Sec.

AMERICAN ASSOCIATION OF PLASTIC SURGEONS, Seattle, May 12-16, 1974. Dr. Nicholas Georgiade, Box 3098, Duke University Medical School, Durham, NC 27706, Sec.

■ **AMERICAN COLLEGE OF CHEST PHYSICIANS, TEXAS CHAPTER, Houston, May 1974. Dr. Byron N Dooley, 7711 Louis Pasteur, San Antonio 78229, Pres.**

■ AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, TEXAS CHAPTER, Houston, May, 1974. Dr. Robert S Browne, 607 Woolworth, Port Arthur 77640, State Dir.

■ AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER, Dallas, May 18, 1974. Dr. Ronald Jones, 5323 Harry Hines Blvd, Dallas 75235, Sec.

AMERICAN GASTROENTEROLOGICAL ASSOCIATION, San Francisco, May 19-25, 1974. Charles B Slack, 6900 Grove Rd, Thorofare, NJ 08086, Exec Sec.

■ AMERICAN MEDICAL WRITERS ASSOCIATION, SOUTHWESTERN CHAPTER, Houston, May 11, 1974. Ms. Judy Ingram, Scott and White Clinic, Temple 76501, Sec.

■ **AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, Galveston, May 24-26, 1974. Geraldine Midgley, PO Box 1287, Uvalde 78801, Exec Sec.**

AMERICAN PSYCHIATRIC ASSOCIATION, Detroit, May 6-10, 1974. Dr. Walter E Barton, 1700 18th St, NW, Washington, DC 20009, Med Dir.

AMERICAN SOCIETY OF COLON AND RECTAL SURGEONS, Washington, DC, May 22-25, 1974. Ms. Harriette Gibson, 320 W Lafayette, Detroit, Mich 48226, Admin Sec.

AMERICAN SOCIETY OF INTERNAL MEDICINE, San Francisco, May 2-5, 1974. William R Ramsey, 535 Central Tower Bldg, Third and Market Sts, San Francisco 94103, Exec Dir.

AMERICAN THORACIC SOCIETY, Cincinnati, Ohio, May 12-15, 1974. Robert G Weymueller, 1749 Broadway, New York 10019, Exec Dir.

AMERICAN UROLOGICAL ASSOCIATION, St Louis, Mo, May 19-23, 1974. Richard J Hannigan, 1120 N Charles St, Baltimore, Md 21201, Exec Off.

■ INTERNATIONAL COLLEGE OF SURGEONS, TEXAS STATE SURGICAL DIVISION, Houston, May 9, 1974. Dr. Edward A Hanna, 6303 S Park Blvd, Houston 77021, Sec-treas.

■ **TEXAS ASSOCIATION OF PHYSICIANS IN NUCLEAR MEDICINE, Houston, May, 1974. Dr. Robert W Parkey, 5323 Harry Hines, Dallas 78235, Sec.**

■ TEXAS PHYSICAL MEDICINE AND REHABILITATION SOCIETY, Houston, May, 1974 Dr. Robert Sine, 9200 Westheimer, Houston 77042, Sec.

■ TEXAS SOCIETY OF ATHLETIC TEAM PHYSICIANS, Houston, May 10, 1974. **Dr. Bobby L Stafford,** 8 Medical Dr, Amarillo 79106, Sec.

JUNE

AMERICAN DIABETES ASSOCIATION, Atlanta, Ga, June 15-16, 1974. J Richard Connelly, American Diabetes Association, 18 E 48th St, New York 10017, Exec Dir.

AMERICAN MEDICAL ASSOCIATION, Chicago, June 22-27, 1974. Dr. Ernest B Howard, 535 N Dearborn St, Chicago 60610, Exec VPres.

AMERICAN NEUROLOGICAL ASSOCIATION, Boston, June 10-12, 1974. Dr. Samuel A Trufant, Cincinnati General Hospital, Cincinnati, Ohio 45229, Sec.

AMERICAN PHYSICAL THERAPY ASSOCIATION, Montreal, Can, June 14-22, 1974. Royce P Noland, 1156 15th St NW, Washington, DC 20005, Exec Dir.

ENDOCRINE SOCIETY, Atlanta, Ga, June 12-14, 1974. Mrs. Marcella M Branch, 1141 Classen Blvd, Suite 319, Oklahoma City 73106, Exec Sec.

■ **MEDICAL LIBRARY ASSOCIATION, San Antonio, June 2-4, 1974. John S LoSasso, Medical Library Association, 919 N Michigan, Suite 3208, Chicago 60611, Exec Dir.**

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Austin, June 11, 1974. Dr. A Bryan Spires, Jr, 211 E 7th, Austin 78702, Exec Dir.

JULY

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■ **TEXAS MEDICAL ASSOCIATION, Austin, Sept 20-22, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.**

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■ AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Dallas, Oct 6-10, 1974. Dr. C M Kos, 15 Second St SW, Rochester, Minn 55901, Sec-Treas.

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■ TEXAS SOCIETY OF INTERNAL MEDICINE, Galveston, Dec, 1974. Dr. Willis A Seyffert, Jr, 6006 N Mesa, #100, El Paso 79912, Sec-treas.

■ TEXAS SOCIETY OF PATHOLOGISTS, El Paso, Jan 24-26, 1975. Dr. John A Webb, 704 Medical Towers, Houston 77025, Sec.

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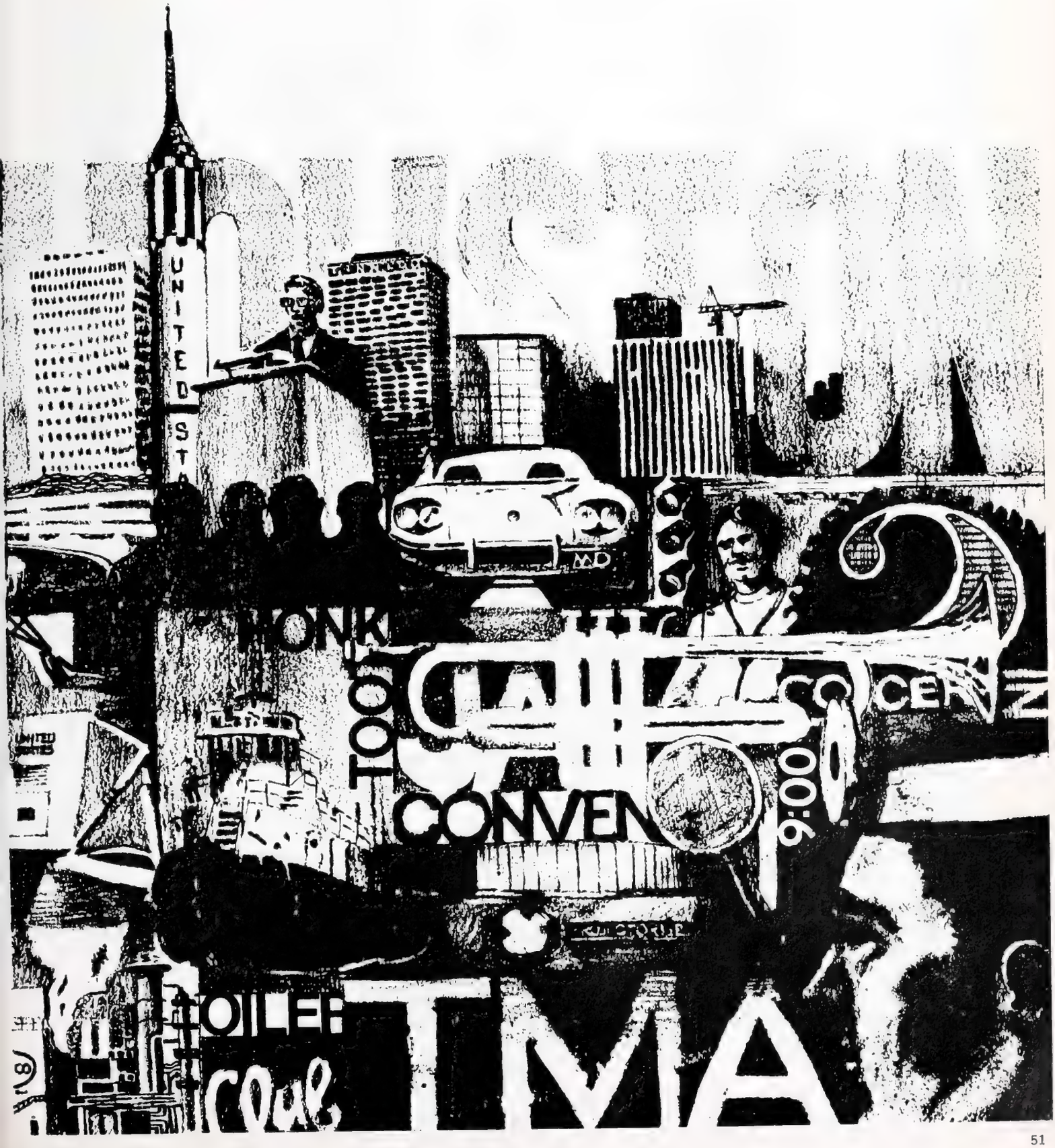

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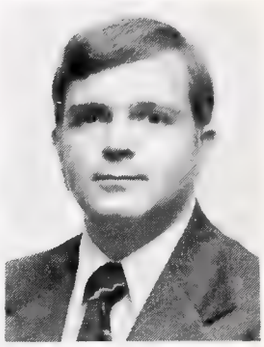
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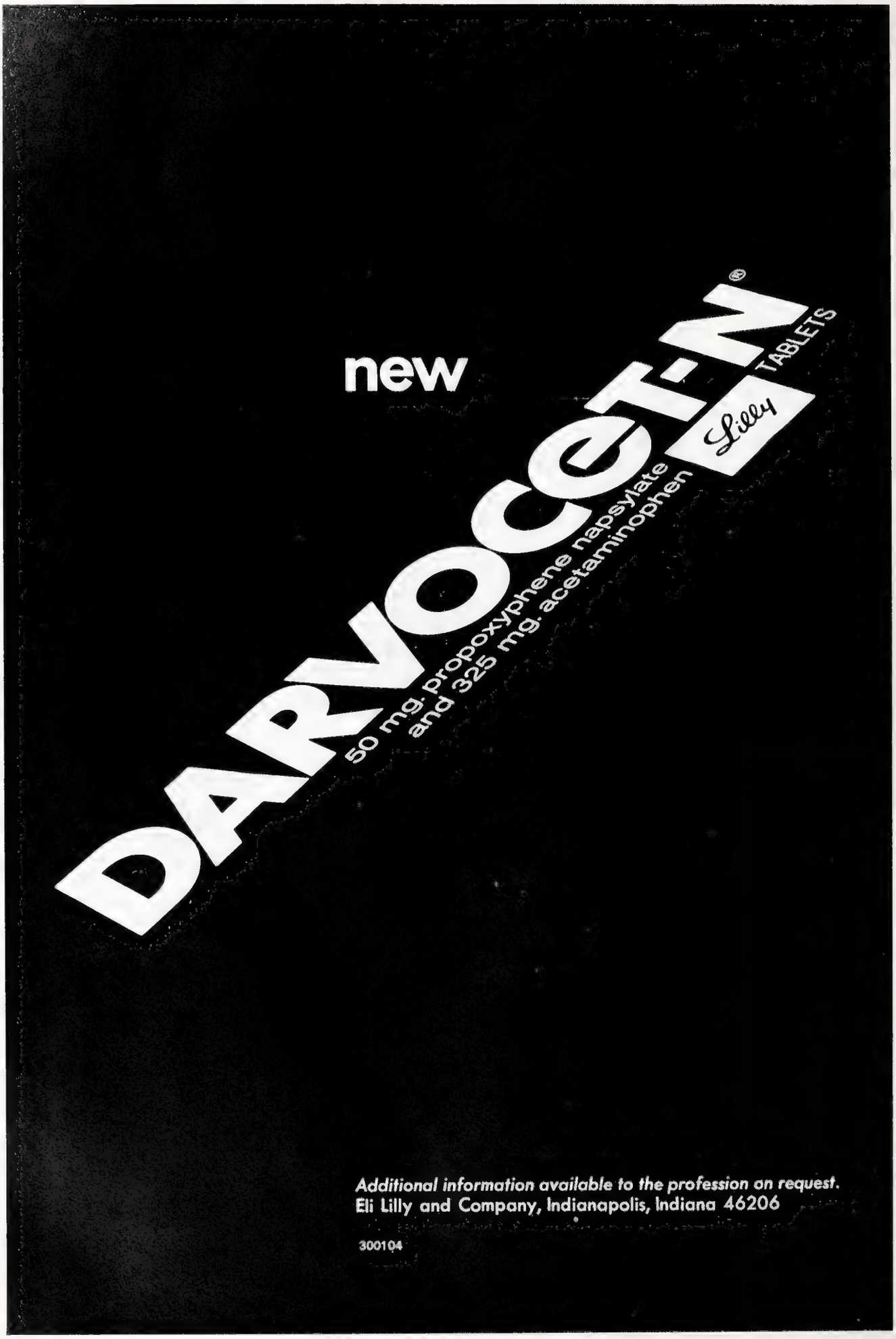
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Clinical examination of renal function

Howard B. Garfinkel, MD; Meyer D. Lifschitz, MD

Knowledge of the mechanisms and management of renal disease is expanding at ever increasing rates, and the subspecialty of nephrology is a rapidly growing branch of medicine. Despite the increasing sophistication in the diagnosis and management of renal disease, the clinical examination of renal function can be accomplished with relative ease. In most cases, the results of a few simple tests will allow the physician to decide whether renal function is normal or abnormal, and if abnormal, to what degree. This article focuses on the measurement of glomerular filtration rate and certain aspects of tubular function, and then briefly considers urinalysis, proteinuria, and sample collection.

Estimation of Glomerular Filtration Rate

The kidneys regulate the chemical composition of the blood (and subsequently the body) by a process which begins with the formation of an ultrafiltrate at the glomerulus. This ultrafiltrate contains crystalloids in the same concentration as they exist in plasma, but it normally contains very little protein. As this filtrate moves down the tubule, many substances are reabsorbed from the tubular fluid while others are secreted into the tubular fluid. The composition of the final urine is the net result of all three processes—glomerular filtration, tubular reabsorption, and tubular secretion.

Measurements (or estimates) of glomerular filtration rate (GFR) are important since GFR is the aspect of renal function that best correlates with the ability of the kidneys to maintain the composition of body fluids within the ranges compatible with life. When nephrologists speak of measuring "renal function," they generally mean measuring GFR. The measurement of GFR requires a substance which is freely filtered at the glomerulus and is neither secreted nor reabsorbed by the renal tubules. The "clearance" of such a substance is a measurement of GFR. Inulin, a polyfructose sugar with a molecular weight of 5,000, meets these criteria under conditions of normal renal function.[1,2] However, its reliability as an accurate estimate of GFR in disease states is less well substantiated. Since the clearance of a substance is calculated as: $\frac{U \cdot V}{P}$, where U and P are the concentrations of the substance in urine and plasma, respectively, and V is the urine flow (in ml/minute), the concentration of the substance in the plasma, P, must either be constant or determined repeatedly. Since inulin is not normally found in plasma, a constant intravenous infusion is required with several determinations of plasma inulin concentration for the calculation of inulin clearance. While this procedure is used for investigational purposes, for clinical purposes GFR is usually estimated by the determination of creatinine clearance or clearance of sodium iothalamate I 125 (Glofil-^{125}I).

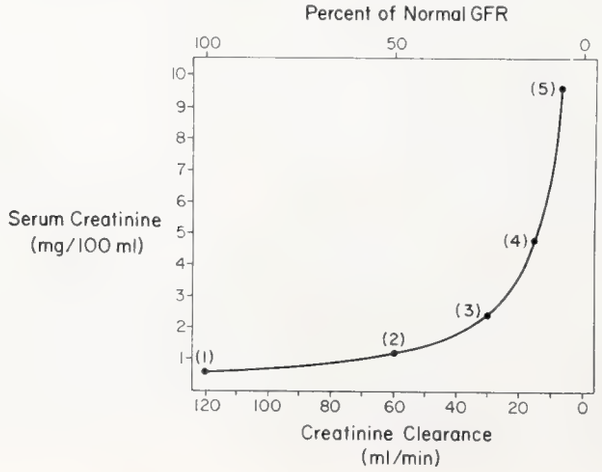
Creatinine is a normal plasma constituent derived from muscle creatine. Normal values range from 0.6 to 1.0 mg/100 ml in women and 0.8 to 1.3 mg/100 ml in men. However, the variation of one person's plasma creatinine concentration is quite small throughout the day and from day to day.[3] Since plasma creatinine concentration is constant throughout the day in persons with stable renal function, creatinine clearance can be determined by obtaining a 24-hour (or other timed interval) urine collection, determining the volume of urine and the creatinine concentration in the urine, and obtaining one blood sample for determination of plasma creatinine con-

centration. For example:
24-hour urine volume = 1,000 ml/24 hours (1,000 ml/1,440 minutes)
Urine creatinine concentration = 100 mg/100 ml
Plasma creatinine concentration = 0.8 mg/100 ml
Then: $\frac{(U) \cdot (V)}{P} = \frac{(100 \text{ mg}/100 \text{ ml}) \cdot}{(0.8 \text{ mg}/100 \text{ ml})}$
$\underline{(1{,}000 \text{ ml}/1{,}440 \text{ minutes})} = (125) \cdot$
(1,000 ml/1,440 minutes) = 125,000 ml/1,440 minutes = 87 ml/minute

Normal values for creatinine clearance are about 120 ml/minute/1.73 sq m body surface area. This gives a range of approximately 70-130 ml/minute for women and 75-140 ml/minute for men.

It is important that a *complete* urine collection be obtained. For example, if only half the urine were collected, then the numerator in the example would be one-half the actual value. Since the rate of muscle creatine release is relatively constant and depends largely on muscle mass, an estimate of the completeness of the urine collection can be obtained by measuring the amount of creatinine excreted in the urine collection. Normally males excrete approximately 20-26 mg of creatinine/kg body weight/day, and females excrete approximately 14-22 mg/kg/day. Values below these ranges suggest incomplete collections, while values above these ranges suggest collections of greater than 24 hours.

1. The relationship between serum creatinine concentration, creatinine clearance, and percent of normal glomerular filtration rate. See text for explanation of numbered points.



The relationship between serum creatinine value and GFR as estimated by creatinine clearance for one hypothetical patient is shown in Fig 1. This relationship is hyperbolic in nature, and by examining several different values on the curve it becomes clear that simply determining serum creatinine value does not necessarily allow one to estimate GFR in a given individual. At point 1, the GFR is 120 ml/minute and serum creatinine concentration 0.6 mg/100 ml. At point 2, GFR is 60 ml/minute, (ie, the GFR is one-half the original value) and the serum creatinine concentration is 1.2 mg/100 ml—a value which is still within normal limits. At point 3, GFR has been reduced to 30 ml/minute (25% of normal) and serum creatinine concentration is only 2.4 mg/100 ml. This graph shows that a value of serum creatinine which might be normal in one patient (possibly a large, muscular man) could represent a loss of 50% of GFR in another patient (a normal-sized woman). Thus for any individual patient, an initial creatinine clearance (or similar measurement of GFR) is necessary to evaluate functioning renal mass.

Within the same patient, once creatinine clearance has been determined, changes in serum creatinine will be a fair reflection of changes in GFR; ie, a rise in serum creatinine concentration from 1 to 2 mg/100 ml would imply a 50% reduction in GFR. As the GFR approaches very low values (about 10 ml/minute), creatinine clearance then becomes a less accurate measurement of GFR. However, by this

point clinical renal disease is well advanced and the patient's management is usually based on clinical symptoms rather than accurate determination of GFR.

Another convenient method of estimating GFR involves the use of sodium iothalamate I 125 (Glofil-125). Glofil-125 can be injected intravenously or subcutaneously, followed by short urine collection periods obtained during water diuresis. I 125 is a gamma emitter and counts in samples of urine and plasma are easily measured in a gamma counter; Glofil-125 clearance is then calculated. Simultaneous determinations of Glofil-125 and inulin clearances have demonstrated good agreement.[4] Glofil-125 clearances are currently used in many nephrology referral centers to measure GFR.

Historically, nonprotein nitrogen (NPN) and blood urea nitrogen (BUN) were both used as estimates of GFR because of the difficulties involved in measuring serum creatinine. Autoanalyzer techniques now allow the accurate determination of creatinine in blood and urine. While there is a relationship between BUN (or NPN) values and GFR, there are several other factors which can cause large changes in BUN. In particular, the BUN varies considerably with the dietary intake of protein, the state of hydration of the patient, and the presence of gastrointestinal bleeding. Urea production can also be impaired in severe liver disease. Thus, while the determination of BUN can be used as a rough estimate of GFR, its degree of variability is such that it should not be used when creatinine determinations are available.

Tubular Function

Although the measurement of glomerular filtration rate is easily performed, the measurement of "tubular function" is more complex because of the many different functions the tubule performs. However, for most clinical purposes, a few simple tests provide an adequate assessment of tubular integrity. Usually the need for tubular function testing arises when a patient has polyuria, hyponatremia, hypernatremia, hyperchloremic metabolic acidosis with urine pH greater than 5.5, glycosuria with normal blood sugar, hypouricemia, or hypophosphatemia.

Concentration and Dilution Tests

The elimination of excess water during water loading and the conservation of water

1. Renal insufficiency
2. Central diabetes insipidus (idiopathic or secondary)
3. Nephrogenic diabetes insipidus
4. Hypokalemic nephropathy
5. Hypercalcemia
6. Osmotic diuresis
7. Diuretic therapy
8. Post obstructive uropathy
9. Sickle cell disease
10. Amyloid kidney

2. Causes of urinary concentrating defect.

3. Causes of urinary diluting defects.

1. Decreased "effective" circulating blood volume
2. Renal insufficiency
3. Syndrome of inappropriate release of antidiuretic hormone
4. Osmotic diuresis
5. Diuretic therapy
6. Chlorpropamide
7. Adrenal insufficiency
8. Myxedema
9. Heart failure
10. Liver failure

during water deprivation is largely a function of the renal tubules. The osmolality of urine will vary from concentrated (1,400 mOsm/kg; specific gravity = 1.036) to dilute (50 mOsm/kg; specific gravity = 1.001) depending primarily on the relative amounts of water and solutes ingested daily.

To test the *concentrating ability* of the kidneys, simple *water deprivation* usually suffices. Normal persons subjected to 24 hours of water restriction should have an increase in urine osmolality to greater than 900 mOsm/kg (specific gravity > 1.026). Water restriction must be undertaken with caution in patients with polyuria, since significant volume depletion can occur. An inability to concentrate the urine may be seen in a wide variety of disorders as outlined in Fig 2.

The *diluting ability* of the kidney can be tested by giving adults 1,500 ml of water to drink over a 20- to 30-minute period and then obtaining urine specimens every half-hour for the next three hours. In normal persons the osmolality of at least one of these specimens will be less than 80 mOsm/kg (specific gravity less than 1.003). The causes of diluting defects are listed in Fig 3. For a detailed discussion of the diagnostic approaches in patients with disorders of concentration and dilution, the reader is referred to the recent excellent review article by Harrington and Cohen.[5]

Acidification Testing

Defects in urinary excretion of acid (apart from the defects seen in chronic renal insufficiency) are becoming more widely recognized. This syndrome is called renal tubular acidosis (RTA) and is characterized clinically by hyperchloremic acidosis of various degrees. There are two main types of RTA: proximal and distal. In the proximal variety, there is a decrease in the ability of the proximal tubule to reabsorb the filtered bicarbonate; urinary bicarbonate wasting develops and plasma bicarbonate concentration decreases. When such patients become severely acidotic (plasma bicarbonate concentrations < 15 mEq/L), the renal tubules can then reabsorb the reduced amount of filtered bicarbonate, bicarbonate wasting ceases and the urine may be quite acid (pH < 5.4) since the distal tubular mechanisms for acidifying the urine remain intact. In distal RTA, there is a defect in establishing pH gradients across the distal tubular epithelium, and despite the presence of acidosis, urinary pH remains > 5.4. To test urinary acidification ability in mildly acidotic patients, the ammonium chloride loading test as described by Wrong and Davies may be employed.[6] Normal persons are given 0.1 gm/kg of body weight of ammonium chloride, and urine samples are collected hourly for six hours; the pH of one of these samples should be <5.4 unless an acidifying defect exists.

Numerous other specific tests of various aspects of tubular function may be necessary when clinically indicated. Studies of tubular handling of glucose, phosphate, calcium, uric acid, and amino acids may be performed relatively simply when necessary.

More specific information on evaluating tubular function is available.[7,8]

Urinalysis

The subject of urinalysis, including methods and interpretations, is described in various sources[8-10] and will not be treated in detail here. Rather, a few neglected but important aspects of this critical laboratory

procedure will be stressed.

The use of the dipstick has become standard technique in most laboratories. Several points regarding the use of dipstick deserve emphasis. Dipsticks must be fresh and stored in *covered* jars between uses. The test for *blood* depends on the presence of *free* hemoglobin derived from lysed red blood cells. If the urine is fresh and concentrated, there may be no lysis of red cells so that significant hematuria may be present but the dipstick test may be negative for blood. A positive dipstick test for *glucose* is *specific* for glucose. The strip employs the enzyme glucose oxidase, and the presence of other reducing substances (eg, ascorbic acid) will not result in false positives as they will with Clinitest tablets. The dipstick test for urinary *protein* is not very sensitive for detecting proteins other than albumin, and we prefer to test the supernatant of the centrifuged urine with 20% sulfosalicylic acid; this additional maneuver takes $<$ 15 seconds and identifies many patients with proteinuria who would remain undetected by dipstick.

Finally, a few words about the sediment. When evaluating a patient suspected of having renal disease, there is no substitute for a careful sediment examination by the *physician;* this is an extremely important diagnostic maneuver that cannot be left to a technician. We emphasize two points with regard to sediments. In the evaluation of *hematuria,* one must search thoroughly for red blood cell casts. The finding of red cell casts usually means there is *glomerular* disease. Such a finding can save many patients with glomerular disease and hematuria an unnecessary and risky evaluation involving urologic instrumentation.

Another point worthy of emphasis is the diagnostic significance of doubly refractile fat bodies, which show up as Maltese

I. 4 gm/24 Hours or Greater

- A. Primary Renal Disease
  1. Glomerulonephritis (poststreptococcal, rapidly progressive)
  2. Idiopathic (lipoid nephrosis, epimembranous nephropathy, chronic glomerulonephritis or membranoproliferative (hypocomplementeric) glomerulonephritis
- B. Renal Disease Secondary to Systemic Disease
  1. Diabetic glomerulosclerosis
  2. Lupus nephritis
  3. Allergic arteritis (periarteritis)
  4. Amyloidosis
  5. Infections (malaria, syphilis)
  6. Neoplasia (lymphoma, Hodgkin's disease)
- C. Renal Disease Secondary to Specific Toxins
  1. Heavy metals (mercury, gold, bismuth)
  2. Drugs (Tridione, Paradione, penicillamine)
  3. Allergens (poison oak or ivy, snake venom, bee stings)
- D. Renal Disease Secondary to Mechanical Causes
  1. Cardiovascular disease (constrictive pericarditis, severe right heart failure)
  2. Renal vein thrombosis

II. Less than 4 gm/24 Hours

- A. Less severe forms of above diseases
- B. Pyelonephritis
- C. Nephrosclerosis

4. Differential diagnosis of proteinuria.

You will be given a container and some cotton swabs soaked in a cleansing solution.

1. Remove the lid from the specimen container and place it upside down on shelf next to the toilet; also place specimen container and cotton swab on shelf.

2. With left hand, grasp penis. If uncircumcised, retract foreskin all the way back; foreskin must be held retracted during entire procedure.

3. With right hand, take one of the cotton swabs and thoroughly clean glans (head) of penis starting at the opening and moving back in a circular motion around glans. Do not wipe forward again with that cotton swab. Discard the swab.

4. Repeat Step 3 with the other swabs.

5. Pick up specimen container in right hand.

6. Continuing to hold foreskin retracted, begin to urinate into the toilet. Once urination has begun, insert the specimen container into the stream of urine and fill about 1/3 full.

7. Remove container from urinary stream and place on shelf.

8. Finish urinating.

9. Place snap-on lid on specimen container.

10. Bring specimen to nurse.

5. Sample instructions for collecting a clean voided urine specimen in a right-handed male.

crosses under crossed polarized light. These fat bodies are lipid esters, usually cholesterol. The presence of doubly refractile fat bodies in cells (renal epithelial or macrophages) or within casts strongly suggests the presence of intrinsic renal disease capable of producing the nephrotic syndrome.

Proteinuria

Proteinuria has been reviewed in *Texas Medicine* recently[11] and therefore will not be discussed in detail. However, we wish to emphasize that qualitative tests (eg, dipstick or sulfosalicylic acid) for proteinuria on random urinalyses are only rough guides to the extent of urinary protein loss. If a qualitative test for proteinuria is positive, it is then necessary to collect a 24-hour urine specimen to quantitate the degree of proteinuria.

Up to 150 mg of protein in the urine per 24 hours is generally considered normal. Values greater than this are abnormal and deserve further investigation. The absence of significant proteinuria does not eliminate renal disease from consideration since pyelonephritis, obstructive uropathy, nephrolithiasis, and renal tumors will often occur without proteinuria.

Fig 4 lists the more frequent renal diseases associated with proteinuria; the differential diagnosis is quite extensive. If a search for systemic disease is not positive, diagnosis can frequently be made by renal biopsy. This procedure and its interpretation will be discussed in another article in this series.

Sample Collection

We would like to share our instructions

for collecting urine samples. Samples are often collected improperly, especially if the patient is instructed in a casual manner. We have reproduced our instructions for the collection of clean voided urine samples (Figs 5 and 6) and 24-hour urine samples (Fig 7).

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Undress completely from the waist down except for shoes. You will be given a specimen container and some cotton swabs soaked in a cleansing solution.

1. Remove the lid from the specimen container and place it upside down on shelf next to the toilet; also place specimen container and cotton swab on shelf.

2. Standing next to the toilet, place left foot on the edge of toilet.

3. Using thumb and fingers of left hand, spread both inner and outer vaginal labia (lips) wide apart (the labia must be held wide open during entire procedure).

4. With right hand, take one of the cotton swabs and wipe yourself firmly starting directly over the urethral opening (where urine comes out) and wiping down and back in a single stroke; do not wipe back up with that cotton swab. Discard the swab.

5. Repeat Step 4 with the other cotton swabs.

6. Pick up specimen container in right hand.

7. Either remain in that position, or squat over toilet, and still holding labia wide apart, begin to urinate into the toilet.

8. Once urination has begun, insert the specimen container into the stream of urine and fill about ⅓ full.

9. Remove container from urinary stream and place on shelf.

10. Sit on toilet to finish urinating.

11. Place snap-on lid on specimen container.

12. Bring specimen to nurse.

6. Sample instructions for collecting a clean voided urine specimen in a right-handed female.

NOTE: Female patients may find it easier to urinate into a clean wide-mouth jar (such as a clean mayonnaise jar) and then transfer urine into specimen container.

1. At exactly 7 AM on Monday, Dec 3, urinate into toilet, being certain to empty your bladder completely. Discard this specimen.

2. All further urine that you pass after that for the next 24 hours goes into the container.

3. At exactly 7 AM on Tuesday, Dec 4 urinate into the container, being certain to empty your bladder completely. That ends the collection.

7. Sample instructions for collecting a 24-hour urine specimen. The times are chosen based on the patient's usual hour of awakening.

Managing chronic subdural hematomas and effusions in infants: A continuing dilemma

Phillip M. Forman, MD; Bradley E. Chipps, MD; Glenn A. Meyer, MD

The historical development and current status of varying approaches to the management of subdural hematomas and effusions in infants is reviewed. Forty-five cases of infantile subdural fluid collections treated over a five-year period at The University of Texas Medical Branch in Galveston, Texas, are reported. Data from these cases failed to demonstrate any relationship between mode of therapy and outcome, a conclusion reached by many previous authors. The lack of a controlled prospective study on the management of infantile subdural hematomas and effusions is evident.

The management of subdural effusions and chronic subdural hematomas in infants has remained a controversial subject since 1944, when Ingraham and Matson[1] focused attention on this previously neglected entity. Our experience indicates the need for clearer definition of the clinical criteria upon which management decisions can be based. Furthermore, the relative efficacy of alternative methods of treating infants with subdural fluid collections has never been subjected to controlled, prospective study.

Acute subdural hematomas in infants with open fontanels and cranial sutures rarely require emergency surgical intervention. In fact, those subdural collections in infants which appear to have begun as hematomas are most often diagnosed at a later, chronic stage. The signs and symptoms, subdural fluid characteristics, and management considerations associated with these chronic "hematomas" differ little from those related to subdural collections which began as effusions. The term "subdurals" in this review is intended, therefore, to include all subdural fluid collections regardless of pathogenesis.

This article explores the continuing controversy regarding management of chronic subdurals through an analysis of cases at The University of Texas Medical Branch at Galveston. A simultaneous survey of current practice and opinion concerning subdurals in infants at all centers with neurosurgical training programs in the United States and Canada (the subject of a separate report)[2] revealed a wide spectrum of approaches to this problem with highly polarized opinions.

Historical

The treatment of subdural hematomas in infants by stripping of the subdural membrane was first reported in the 1930s. Ingraham and Matson,[1] reviewing 98 cases of post-traumatic subdurals, were convinced that excision or stripping of the subdural membrane was essential in management. In 1950, McKay et al[3] called attention to the occurrence of subdural effusions in association with purulent meningitis, particularly *Hemophilus influenzae*. Likening these to chronic post-traumatic hematomas, they suggested these also be treated by membrane stripping.

A year later, Smith et al[4] reported another series of postmeningitic effusions and pointed out that the effusion often resolved and the child recovered following only needle aspiration of fluid. Others subsequently have reported the efficacy of needle fluid aspiration alone. Most recently, McLaurin et al[5] described favorable results in a series of infants whose subdural collections were aspirated only when relief from signs or symptoms of increased intracranial pressure was required.

In 1957, Ransohoff[6] first described the use of subdural-pleural shunting in the treatment of effusions, particularly when craniocerebral disproportion (ie, a large

loculated subdural space associated with increased head size and often cerebral atrophy) seemed to contribute to the persistence of fluid. Large numbers of infants treated for subdurals by shunting procedures were reported in 1968 by Till[7] and 1969 by Moyes;[8] both authors believed this procedure to be superior to membrane stripping.

As early as 1956 Herzberger and his coworkers[9] suspected that long-term prognosis was unrelated to the presence of subdural membranes or their removal. Rabe et al, in 1962[10] and again in 1968,[11] emphasized how extensively the membranes covered the cerebral cortices, the impossibility of their complete removal, and the regularity with which the fluid reaccumulated after membrane stripping. They, too, believed prognosis was unrelated to mode of therapy.

Thus the controversy among proponents of membrane excision, shunting, repeated aspirations, and no therapy continues[2] despite more than two decades of experience.

UTMB Review

The records of all cases of subdural hematomas and effusions in infants under two years seen at The University of Texas Medical Branch from 1965 through 1970 were reviewed. Many different physicians were responsible for the management and follow-up of the study group. Data were available on 45 cases, mean age six and one-half months, including 30 males and 15 females (a 2:1 sex ratio commonly reported). No instance of subdural empyema was found.

Fig 1 summarizes the signs and symptoms present at the time of diagnosis. As others have suggested, it is difficult to

Irritability	23
Fever	18
Vomiting	17
Tense fontanel	17
Seizures	16
Increasing head circumference	15
Altered consciousness	13

1. Signs and symptoms associated with onset of subdural effusions (45 cases).

Trauma	
Perinatal	5
Postnatal	17
Meningitis	
Hemophilus	7
Other	7
Hydrocephalus	4
Unknown	5

2. Etiology.

	Positive/Attempts
Needle aspiration	36/40
Arteriography	16/19
Brain scan	9/16

3. Diagnostic studies in 45 cases.

Needle aspiration only	22
Burr holes	5
Craniotomy, no stripping	4
Membrane stripping	9
Subdural shunt	1
No treatment	4

4. Modes of therapy.

Good to excellent	15
Fair	3
Poor	10
Died	3
Total	31
No follow-up	14

5. Prognosis: Follow-up five months-five years.

	Good	Fair	Poor	Died
Trauma	7	2	4	1
Meningitis	5		4	1
Other and unknown	3	1	2	1

6. Etiology versus prognosis.

	Taps Only	Surgery	None
Trauma	8	13	1
Meningitis	10	4	
Hydrocephalus and unknown	4	2	3

7. Therapy versus etiology.

	Good	Fair	Poor	Died
Taps only	7		5	2
Burr holes	1	1	2	
Craniotomy	1	1	2	
Stripping	2		1	1
Shunt	1			
No therapy	3	1		

8. Therapy versus prognosis.

know whether these are caused by the subdural "mass" or are the result of the primary process such as trauma or infection. Obviously, some infants with these signs and symptoms are found not to have subdurals. Conversely, in those studies where subdural taps were done routinely in all infants with purulent meningitis, many apparently asymptomatic subdural effusions are found.[12]

It has been observed repeatedly that few infants have dramatic improvement of such signs as fever following subdural tap. In this regard, Dodge and Swartz[13] concluded that subdural effusions in meningitis usually result in abnormal findings on skull transillumination and at times cause vomiting, an enlarging head, and full fontanel. They felt that all other signs and symptoms were more likely related to other changes produced by the meningitis. These same conclusions have been expressed regarding post-traumatic chronic subdurals in infants.[11]

Fig 2 lists the apparent etiology of subdurals in our 45 cases. The distribution of those related to trauma, meningitis, and other causes is similar to other series. The postnatal trauma group included at least five cases of the battered child syndrome. The cases related to hydrocephalus occurred following air studies and/or ventricular shunts; an increased risk of subdural hematomas in such situations has been described.[14]

Diagnosis of subdural effusion in infants usually is made readily by needle aspiration through an open fontanel or suture line (Fig 3). The five infants in whom no diagnostic needle aspirations were done and the four with negative taps were all diagnosed by angiography. In no case was the initial diagnosis made by brain scan, and in no case was a scan positive when needle aspiration

was negative. The nine positive scans were all in infants in whom the subdural already had been documented by needle aspiration. Transillumination as a simple screening device for possible subdurals in infants has been emphasized by Dodge.[13] It is our experience, too, that this is a valuable tool, but there is no controlled data on the reliability with which one can predict the existence of subdural fluid by transillumination.

Fig 4 summarizes our modes of therapy. Most infants who eventually underwent a surgical procedure had varying numbers of subdural needle aspirations first, and nearly 50% of our patients were treated with taps alone. No consistent reasons were recorded for the decisions not to excise membranes in the four patients who underwent craniotomy without membrane stripping. While the "no treatment" group is of interest, no criteria were recorded in the medical records to explain the decision to withhold therapy. Furthermore, it was rare to find recorded specific criteria, other than failure of needle aspiration, for proceeding to a surgical procedure.

Nearly 50% of patients in whom follow-up data were available were free of neurologic abnormality or seizures (Fig 5). Ten patients coded as having a poor outcome had varying degrees of developmental retardation, motor disabilities sufficient to be classified as cerebral palsied, and/or convulsive disorders. Three patients had minimal abnormalities on neurological examination, including one who, shortly after treatment for subdurals, had two convulsions with no recurrence since treatment with anticonvulsants.

The relationship between etiology and prognosis (Fig 6) suggests a slightly better outcome for the post-trauma cases, but collectively there appears to be little difference in prognosis based on etiology in the literature.

It is of interest to relate therapy to etiology as in Fig 7. These data may simply reflect the varying approaches of neurosurgeons who manage most trauma cases versus pediatricians who manage most meningitis cases. On the other hand, it is generally believed that postmeningitic effusions resolve more readily than those related to trauma, and would thus be less likely to come to surgery.

Fig 8 relates mode of therapy to outcome. Except for the "no treatment" group, 50% did well and 50% did poorly or died in all treatment groups. This is comparable to results in virtually every prior retrospective study. Herzberger in 1956,[9] Benson et al in 1960,[12] Shulman and Ransohoff in 1961,[15] Rabe et al in 1968,[11] Yashon et al in 1968,[16] and Goodman and Mealey in 1969[17] all found that about 50 to 65% did well and that no correlation could be found between ultimate prognosis and mode of therapy in uncontrolled studies.

With the exception of Benson et al,[12] all of these authors concluded that membrane stripping was rarely if ever indicated. The dictum that membranes restrict cerebral growth is unproven; the normal brain grows despite the more formidable restriction of the skull. As previously stated, membrane stripping does not always resolve the effusion, which frequently recurs postoperatively.

Several of the authors cited concluded from postmortem evidence, and from the appearance of the brain at craniotomy in survivors, that pre-existing or concomitant cerebral defect or atrophy was often a determinant of persistent effusion and of prognosis.

As stated before, some authors support the idea that subdural shunting is a desir-

able procedure when persistent effusion is associated with a large dead space, ie, craniocerebral disproportion. We agree that prevention of craniocerebral disproportion is a fundamental objective in management, but shunting cannot alter underlying atrophy and its sequelae. In many cases the effusion will eventually clear with conservative therapy or none at all.

Thus there appears to be no definite evidence that in the routine case any surgical procedure improves prognosis beyond that achieved by needle aspiration alone. Moreover, the criteria for selecting surgical candidates and choosing particular procedures are vague, highly variable from one center to another, and are not founded on controlled studies.

All of the reports cited in this review, including our own, are retrospective and suffer the expected weaknesses of biased patient selection, unclear or inconsistent criteria for selecting a mode of therapy, and a lack of control groups. Notable, of course, is the paucity of untreated controls. Several of the retrospective studies, including our own, include occasional untreated cases; but the number is small and the reasons for withholding therapy are unstated, thus making interpretation of outcome more difficult.

As a result of this review and of the survey of neurosurgical training program directors in the United States and Canada,[2] we believe controlled, prospective studies should be conducted to further evaluate each of these issues, especially that of therapy.

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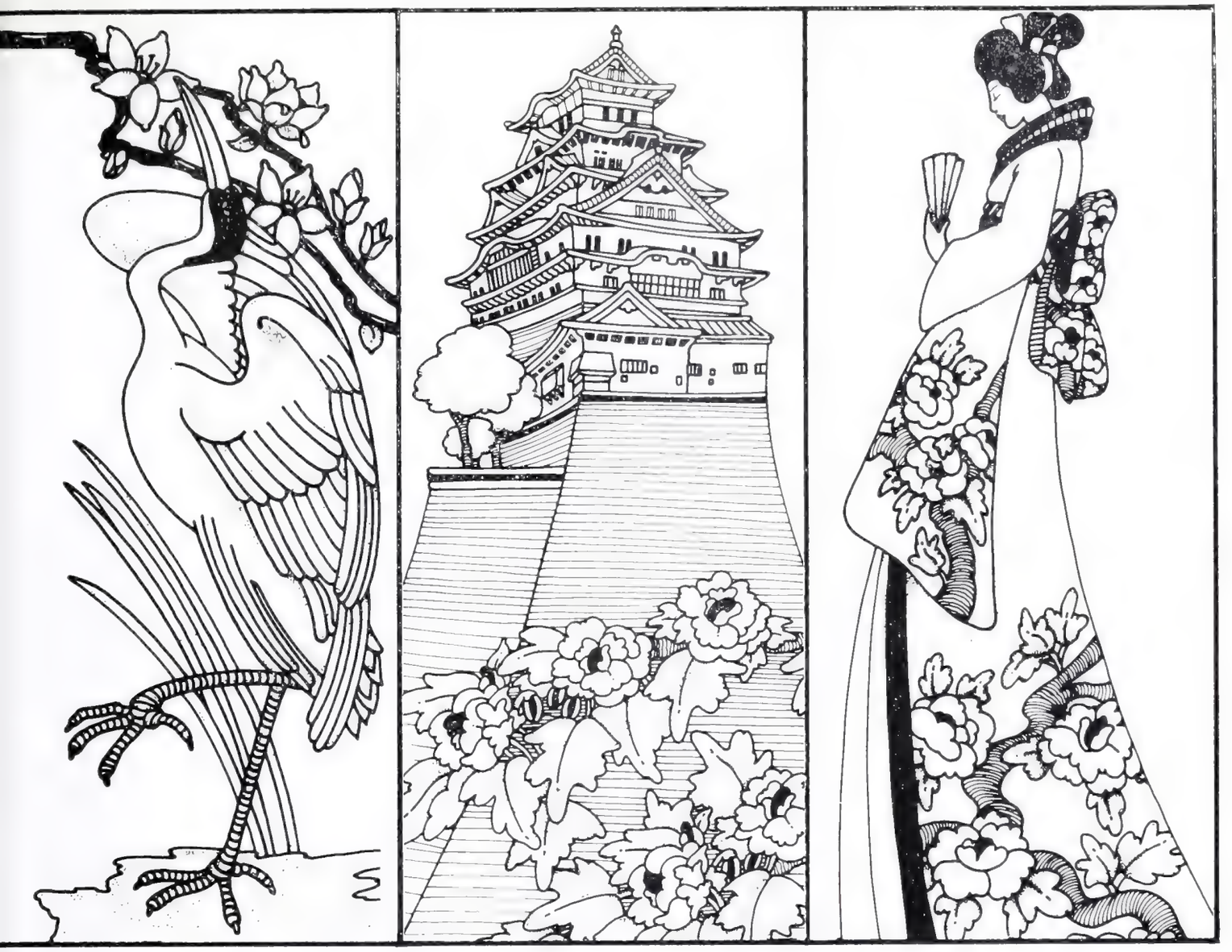

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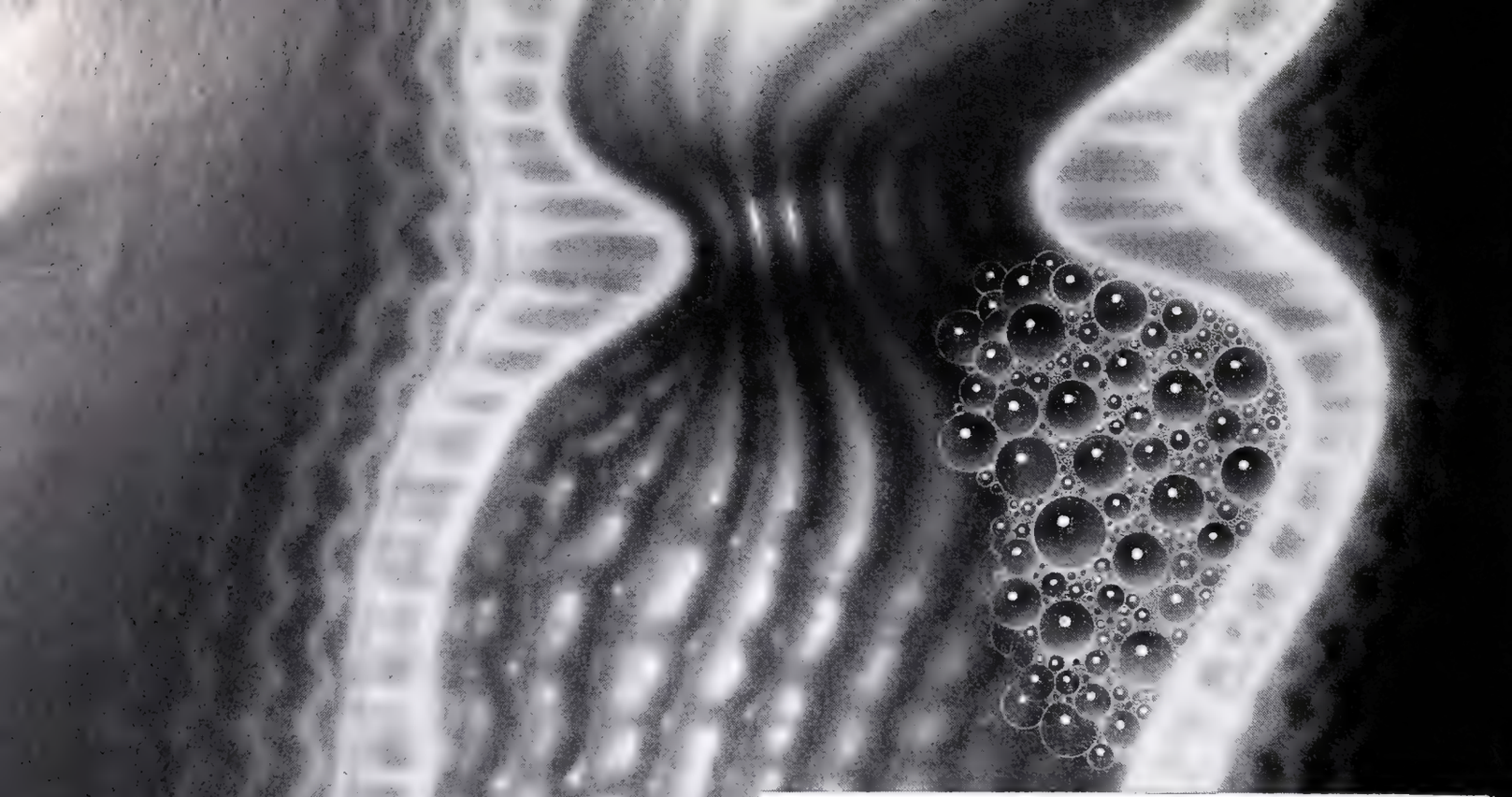

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Dacryocystorhinostomy in children

R. Larry Brenner, MD

The subject of dacryocystorhinostomy in children has received minimal attention in the ophthalmic literature during the past several years, despite the continuing advances in the knowledge of the anatomy, physiology and pathology of the lacrimal drainage system. In the past ten years, several reports have discussed the anatomy and physiology of the lacrimal passageways, and the specific surgical procedures recommended for their treatment. Most of the emphasis has been on the treatment of adult lacrimal obstruction, and correctly so, for it is here that the most common surgical indications for relief of lacrimal obstruction lie.

In the past three years we have performed dacryocystorhinostomy on nine children for relief of chronic nasal lacrimal obstruction, as evidenced by epiphora, with or without concomitant infection. This group of children has been especially interesting because of the theoretical possibilities of altering the bony structure of the nose and medial wall of the orbit at ages at which rapidly growing bones centers and immaturity might otherwise provide at least a theoretical barrier to surgery. This report summarizes the results in these children, compared with results of similar kinds of surgery in adults, and emphasizes certain preoperative and operative techniques that are helpful in managing these cases.

Most of these children were referred to us because of persistent epiphora, due to either neglected congenital nasal lacrimal duct obstruction or unsuccessful treatment. Therefore, the first step in the treatment of these children is proper evaluation of the nasal lacrimal system when symptoms first appear. The treatment should be given at an early age, following the surgical principles outlined by Jones et al.[1]

Methods

Dacryocystorhinostomy was performed on nine children (Fig 1). The age range of 5 to 17 years is somewhat arbitrary, and compares with 41 cases of dacryocystorhinostomy performed in adults in a similar period. No young adults presented with surgical disease requiring dacryocystorhinostomy.

Fig 2 outlines the age range and follow-up of nine cases. None of the patients has had a recurrence of the epiphora during this time.

A review of records to determine the causes of epiphora in each of the nine children is summarized in Fig 3. Most of the patients had a history of epiphora at least some time beginning in infancy, and in some the lacrimal sac had been probed unsuccessfully. In three cases epiphora began in early childhood for unknown reasons, and symptoms were intermittent. One of the children had direct nasal-lacrimal trauma as the result of multiple facial fractures suffered in an automobile accident, and one child had direct trauma to the canalicular system by an injury associated with multiple lid lacerations.

The treatment procedure included control of preoperative dacryocystitis by broad-spectrum antibiotics (orally), topical steroid antibiotics, and occasionally antihistamines and nasal sprays. Preoperative shrinkage of the nasal mucous membranes was achieved with Afrin nasal spray and a cocaine-soaked one-fourth inch pack. As seen in Fig 4, in two of the nine cases, a "classic" dacryocystorhinostomy with suturing of anterior and posterior flaps was performed, but without the inclusion of any lacrimal stent at the end of the procedure.[2] Six of the patients had dacryocystorhinostomy by the Iliff technique,[3] with the inclusion of a rubber French nasal catheter in the lacrimal sac at the end of the procedure.

Adults (Age 30-82)	41 Cases
Children (Age 5-17)	9 Cases
Young adults (18-30)	0 Cases

1. Prevalence of dacryocystorhinostomy, 1969-1972.

Age range	5-17 Years
Average	10.3 Years
Follow-up	2½-35 Months
Average	19 Months

2. Data on nine cases requiring dacryocystorhinostomy.

Unresolved congenital nasal-lacrimal duct obstruction	4
Proximal nasal-lacrimal duct or sac obstruction, etiology unknown	3
Nasal-lacrimal duct trauma	1
Lacrimal sac or canalicular trauma	1

3. Presumed causes of epiphora in nine cases.

Dacryocystorhinostomy, classic technique with anterior and posterior flaps	2
Dacryocystorhinostomy, Iliff technique with nasal catheter	6
Dacryocystorhinostomy with Jones tube	1

4. Approach to surgery.

Surgical cures	8
Surgical failure	1
(Reoperated with Jones tube successfully)	

5. Results in nine cases.

		Success %
Children	8 of 9 functioning	88
Adults	34 of 42 functioning	81

6. Comparison with results of adult dacryocystorhinostomy.

Nasal bleeding (catheter technique)	1
Failure (required Jones tube later)	1
None	7

7. Complications.

Results

Fig 5 summarizes the results of surgery. Eight of the patients had complete relief of epiphora, with no recurrence. One patient with canalicular trauma, who had an adequate repair at the time of injury, subsequently developed epiphora. This was not relieved by dacryocystorhinostomy, but responded to conjunctivo-dacryocystorhinostomy with a Pyrex tube.

Comparing the results in children with those in adults during a similar period (Fig 6), it can be seen that the children gave a success rate of 88%, while a similar series of adults undergoing similar surgery gave an 81% success rate. From a statistical standpoint, the difference in results between the children and the adults is not significant.

Surgical Conditions and Complications

Because it was thought that from a theoretical standpoint a chance of fibrous and/or bony overgrowth of a dacryocystorhinostomy opening would be more prevalent in children than adults, the Iliff technique[3] was preferred. The placement of the nasal catheter for two weeks, followed by its removal in the office, has provided no problems, either to the patient or the doctor. The technique is simple, and I have used it for all dacryocystorhinostomies in both adults and children. A somewhat smaller ostium required by this technique (10 mm in adults, 8 mm in children) also requires less bone removal from the medial wall of the orbit, and, at least theoretically, will provide less distortion of nasal anatomy as the child grows. One child suffered nasal bleeding one week after surgery, while performing as a soprano in a choir. This required hospitalization, anterior and pos-

terior nasal packing, and removal of the catheter. This did not alter the surgical result and epiphora was still relieved. The one surgical failure was in a child who had canalicular trauma, and despite seemingly adequate repair, possibly had at least functional stenosis at the internal common puncta of the canaliculi. These complications are summarized in Fig 7.

In order to prevent bleeding during surgery and to provide the best cosmetic result, two points should be emphasized. Preoperative nasal packing with cocaine-soaked one-fourth inch nasal gauze helps to shrink the mucous membrane of the nose considerably. This aids in the surgical identification of the nasal cavity, and decreases nasal bleeding. In children, bleeding is more apt to occur and the use of the pack is most important in this group of patients. Because of the tendency for children to bowstring surgical scars, a straight incision in the medial canthus area was used so as to follow as closely the nasojugal fold. This gave excellent cosmetic results. At the time of removal of bone from the lacrimal fossa, it was found that the consistency of the bone often would be soft, vascular, and easily torn. Simple mosquito hemostats were excellent as bone rongeurs in this group of patients, and also helped prevent tearing of the mucous membrane of the nose.

Summary

This article summarizes the results of dacryocystorhinostomy in nine children, performed over the past three years with an average follow-up of 19 months. The results indicate that the surgical results in this group of patients are at least as good as similar surgery in adults. Reemphasis on early and proper nasal lacrimal probing in infants with epiphora is stressed. Careful attention to preoperative control of dacryocystitis, adequate shrinking and packing of the nasal mucous membranes, use of straight surgical incisions, and the use of the Iliff technique for dacryocystorhinostomy all are considered important details in the handling of children requiring dacryocystorhinostomy (Figs 8-9).

It is obvious that longer follow-up is necessary before definite conclusions can be made, but the early results are at least encouraging.

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Dr. Brenner, Ophthalmology Associates, 3320 Plainview, Pasadena, Texas 77504.

1. Control dacryocystitis preoperatively if possible
2. Preoperative nasal packing; Afrin spray; cocaine and ¼" nasal pack
3. Avoid curved incision
4. Iliff trephines 6, 8, and 10 mm with Stryker saw
5. Curved small hemostats for bone removal

8. Helpful hints.

1. Short-term results of dacryocystorhinostomy in children are at least as good as in adults.
2. Congenital nasolacrimal duct obstruction should be treated early.
3. Careful attention to nasal packing, incision location, and osteotomy is recommended.
4. Use of the Iliff catheter technique is theoretically advantageous in children.

9. Summary.

Tracheobronchial injuries secondary to blunt thoracic trauma

David E. Beesinger, MD; Frederick L. Grover, MD; J. Kent Trinkle, MD

Tracheobronchial injuries due to blunt thoracic trauma are being seen with increasing frequency. More high-speed automobile accidents combined with improved evacuation techniques result in more patients reaching the emergency room alive. This article presents two cases of major tracheobronchial disruption and reviews the principles of managing such injuries.

Case Report

Case 1: A 22-year-old man was driving a car involved in a traffic accident. When he arrived at the emergency room, he was dyspneic, had subcutaneous emphysema, and a flail chest with a steering wheel imprint on the anterior chest wall. Crepitation and displacement of the thyroid cartilage suggested a fractured larynx. A roentgenogram of the chest revealed a pneumomediastinum and fractures of the fourth, fifth, and sixth ribs on the right.

A chest tube was placed in the right pleural space and the patient was taken to the operating room. Laryngoscopy confirmed the presence of a fractured larynx. Bronchoscopy revealed a severe laceration of the right main bronchus and carina. Exploratory thoracotomy (right side) was performed; the mediastinal pleura was intact but distended with air. When the pleura was opened, a 7-cm linear separation of the membranous portion of the trachea from the cartilages was discovered. The right main bronchus was fractured and completely separated from the trachea except for a thin layer of pleura.

A sterile endotracheal tube was inserted into the distal end of the right bronchus to ventilate the right lung while the trachea and carina were repaired. After the trachea and carina were closed, the left lung was ventilated and a right pneumonectomy was performed. The right main bronchus was too badly shattered to repair and reattach to the already precarious multiple tracheal suture lines. After closure of the chest incision, the fractured larynx was repaired and a tracheostomy performed.

The patient made a surprisingly uneventful recovery. Eight months postoperatively, he is doing well. A recent bronchoscopy demonstrated excellent healing of the trachea, and a roentgenogram of the chest shows full expansion of the left lung with opacification of the right pleural space (Fig 1).

Case 2: A three-year-old male was struck by a car. On arrival at the emergency room, his vital signs were normal except for a respiratory rate of 20/minute. The trachea was shifted to the left and there were no breath sounds over the right chest. A roentgenogram of the chest revealed a right pneumothorax (Fig 2). A chest tube was inserted into the right pleural space which revealed a large, continuous air leak. The lung did not reexpand (Fig 3).

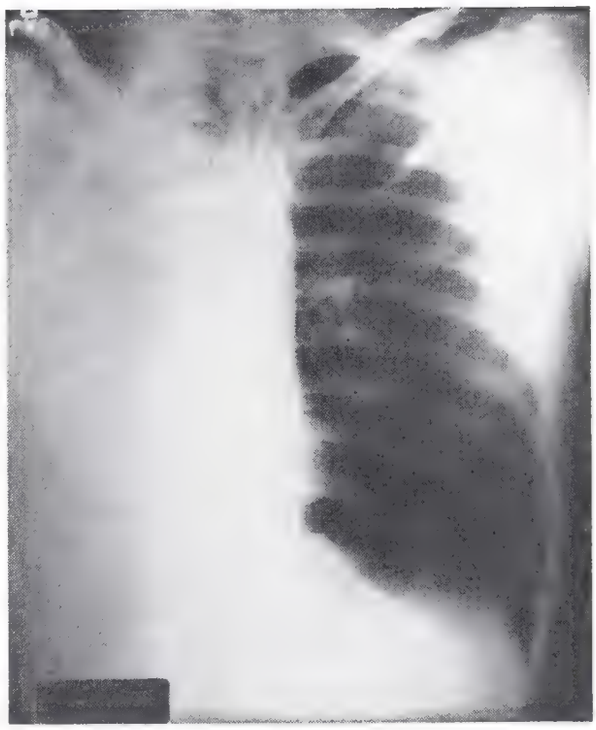
Bronchoscopy was performed and large, stellate lacerations of the right main and intermediate bronchi were visualized. Right exploratory thoracotomy revealed massive contusion and laceration of the right lower lobe of the lung and extensive fracture of the entire right bronchial tree. A pneumonectomy was performed. The patient made an uneventful recovery and was discharged on the seventh postoperative day.

Incidence

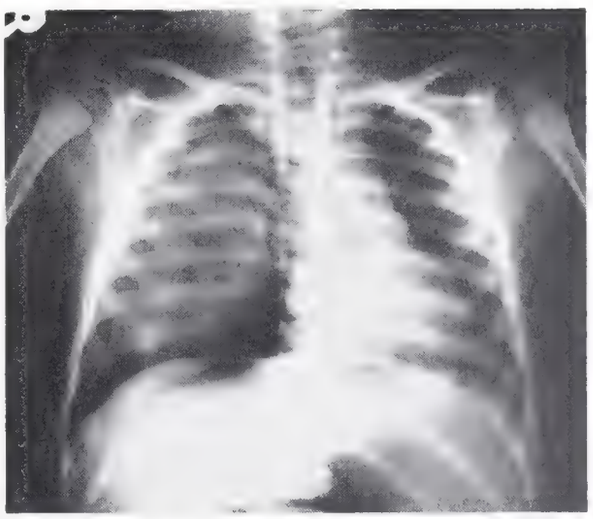
Injuries to the trachea and bronchi may not be diagnosed or the patient may die before reaching the hospital. These factors make it difficult to determine the exact incidence of tracheobronchial injuries from blunt trauma. Ecker found 30 cases in a ten-year period in Dallas County, Texas.[1] Nine patients were alive and 21 were dead on arrival. Fourteen of the 30 received injuries in automobile mishaps.

Bertelsen and Howitz reviewed 1,178 necropsy reports of trauma deaths from 1961 to 1966.[2] There were lesions of the trachea or bronchi, or both, in 33, with 28 following traffic accidents, two pedestrian-train mishaps, two crush injuries, and one a fall. Nine patients had injuries to the trachea—four cervical and five thoracic. Twenty-eight patients had bronchial injuries, and five of these were bilateral.

Most victims were under age 40, and 75% were male.[3-5] Injuries to the bronchi and intrathoracic trachea are more prevalent than those to the cervical trachea, probably due to the protection of the latter by the mandible and sternum anteriorly and the spinal column posteriorly.[6] Injury to the trachea and bronchi following blunt thoracic trauma is uncommon, but it is increasing. Burke reported a ten-fold increase in traumatic rupture of the bronchus in the ten years prior to 1962.[7]



1. Roentgenogram of the chest taken eight months after a right pneumonectomy. The right pleural space is opacified and the left lung is fully expanded.



2. Roentgenogram of the chest of a 3-year-old boy who was struck by a car. There is a partial right pneumothorax with no rib fractures or other abnormalities.

Mechanism of Injury

The level of involvement may incriminate a specific mechanism of injury. Injuries to the larynx and upper trachea are referred to as the "padded dash syndrome."[8] The forehead hits the windshield during deceleration causing hyperextension of the neck which then strikes the padded dashboard. The most common injury to the cervical trachea is transverse rupture with retraction of the distal segment into the superior mediastinum.[4,9]

Rupture of the intrathoracic trachea is usually due to sudden compression of the elastic anterior chest wall forcing the trachea against the vertebrae. The membraneous portion of the trachea is usually torn from the cartilage within 2.5 cm of the carina.[10] Rupture of the trachea also can be the result of shearing.[11] The sudden increase in airway pressure while the glottis is closed results in a shearing force on the

bronchus, producing rupture. McGrath was unable to burst a cadaver trachea with positive intraluminal pressure. However, a sharp blow always ruptured the inflated trachea, producing a longitudinal split in the posterior wall.[12] This injury may occur with minimal trauma. Others have reported tracheal laceration due to overinflation by an endotracheal tube.[13]

Clinical Patterns

Dyspnea, cyanosis, hemoptysis, pneumothorax or hemothorax, and subcutaneous or mediastinal emphysema are the findings most often associated with injuries to the tracheobronchial tree.[14-15] In a study of 38 cases of bronchial injury, 16 patients had pneumothorax, 12 showed subcutaneous emphysema, 10 sustained hemothorax, and 9 had bronchial bleeding. Rupture of the right main or distal left bronchus usually produces a pneumothorax. A similar lesion of the trachea or proximal left bronchus usually will produce mediastinal emphysema, dyspnea, cyanosis, deep cervical emphysema, and hemoptysis.[10,17] Hood and Sloan reviewed the literature up to 1959, and found that 10% of tracheobronchial injuries produced no symptoms. Fifty percent of the patients had no other significant injuries. Diaphragmatic, cardiac and aortic injuries, rupture of lung parenchyma, and laceration of the pulmonary vessels were rare.[15,17]

In Burkes' review of 90 cases, 52 patients had associated rib fractures.[7] The only patients with ruptured bronchus and no rib fractures were children or young adults, and no victim over age 30 had a bronchial rupture without rib fractures. This relationship is due to the decreasing elasticity of the chest wall with age.

Diagnosis

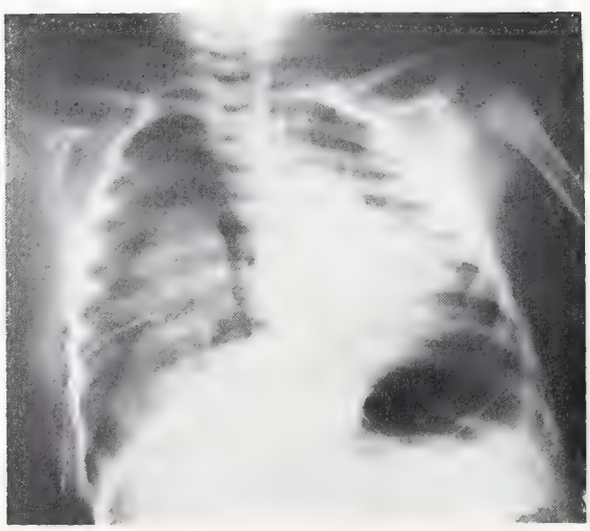
Patients suffering damage to the trachea or bronchus may be either asymptomatic or in obvious respiratory distress, thus making the diagnosis either simple or difficult. Bronchoscopy is the most valuable diagnostic procedure and may be the only way to detect subtle lesions.[3,14] Without bronchoscopy, bronchial injuries may not be recognized until stenosis occurs. The diagnosis has been made three weeks to 32 years following rupture of the bronchus.[7] Bronchoscopy should be performed in patients with a pneumomediastinum or a pneumothorax with a persistent air leak.

Roentgenograms of the chest, including lateral and oblique views, are essential in making the diagnosis. Pneumomediastinum may be visible with only 5 cc of air. Subcutaneous or deep cervical emphysema occurs when the air dissects superiorly. Between 39 and 56% of patients have pneumomediastinum, and pneumothorax occurs in two-thirds of cases.[19] Rib fractures may point to tracheobronchial injuries, especially if the first, second, or third rib is fractured.

"Deep cervical emphysema" seen on roentgenograms may be a reliable early sign of tracheobronchial rupture, since the deep cervical fascia is the anatomical extension of the mediastinum.[20] Air found in this space is not subcutaneous emphysema. Tomography is helpful only with large defects in the airway.[9] Bronchography is useful in patients that are diagnosed late; it shows the site of injury, associated lesions, and condition of the distal airway.

Tracheobronchial injuries may not be suspected until they appear as complicated problems. Several authors have reported

3. Roentgenogram of the chest of the same patient as in Fig 2. A large chest tube has been inserted into the right pleural space, but the pneumothorax has increased. There was a large, continuous air leak from the chest tube.



such lesions being diagnosed up to 22 years after trauma, after bronchial stenosis or tracheoesophageal fistulae developed.[21,22]

Management

Rupture of the trachea or bronchus is analogous to any fracture; treatment should reduce and splint the fracture.[23] Tracheobronchial lacerations should be treated with immediate suture or anastomosis over an endotracheal tube. Interrupted, nonabsorbable sutures should carefully approximate mucosa and cartilage. Beall advocates Marlex mesh for repair of large tracheal defects.[24] There are reports of a few cases in which patients did well with only tracheostomy.[16] However, lesions of the trachea or major bronchi should then be covered with pleura, pericardium, or an intercostal muscle pedicle. Peripheral bronchial lacerations usually can be handled by tube thoracostomy, but lobectomy may be necessary if a persistent air leak is present. Even late resection of a stenotic bronchus or trachea with end-to-end anastomosis can often be performed. Tracheal strictures as long as 6 cm long can be excised with primary anastomosis. Tracheal defects have been replaced by autografts utilizing skin, fascia, and pleura with extrinsic support. Of these, viable pedicle grafts of muscle, periosteum, pleura, and intercostal vessels and nerves have been used. Finally, recent studies have shown the feasibility of prosthesis of Marlex mesh, polyethylene, stainless steel, and Lucite for reconstruction of the trachea.

In peripheral bronchial injuries, pulmonary resection may be the treatment of choice. Mathey presented 20 patients, 5 of which required pulmonary resection.[25] Stricture which develops at the site of a tracheal injury occasionally may be managed by dilatations. Transection of a bronchus may go for extended periods without detection.[9] The bronchus distal to the obstruction becomes distended with sterile mucus, which can be removed when anatomic continuity is restored. Inflammation and suppuration are rarely present and bronchiectasis usually is minimal and reversible. Mahaffey reported a patient in which bronchial continuity was restored 11 years after occlusion of the left main bronchus. Pulmonary function studies seven weeks and five months after operation showed progressive improvement.

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Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.
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Tetracyclines are present in milk of lactating women taking tetracyclines.
To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.
Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
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Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
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Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**)
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Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
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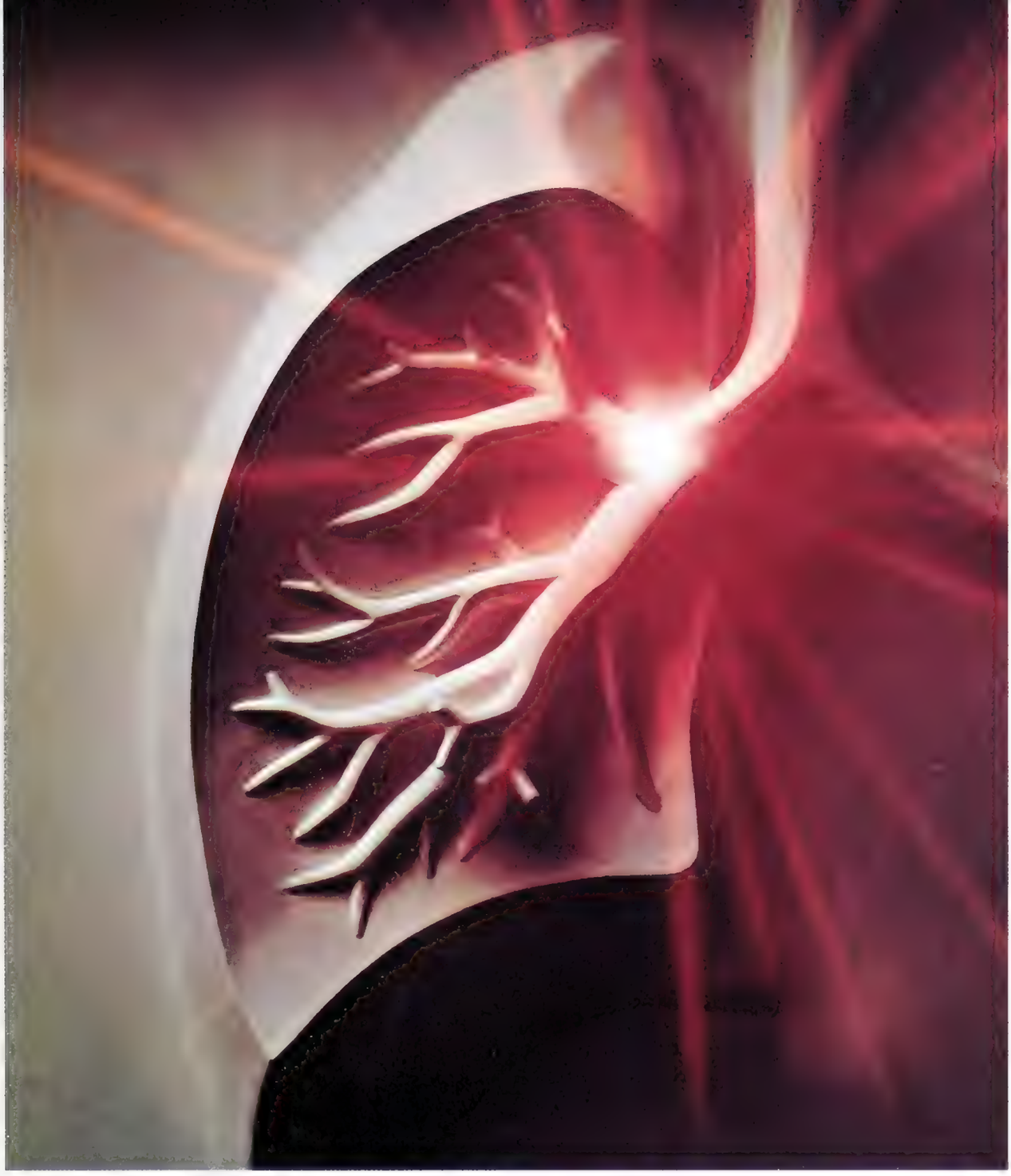

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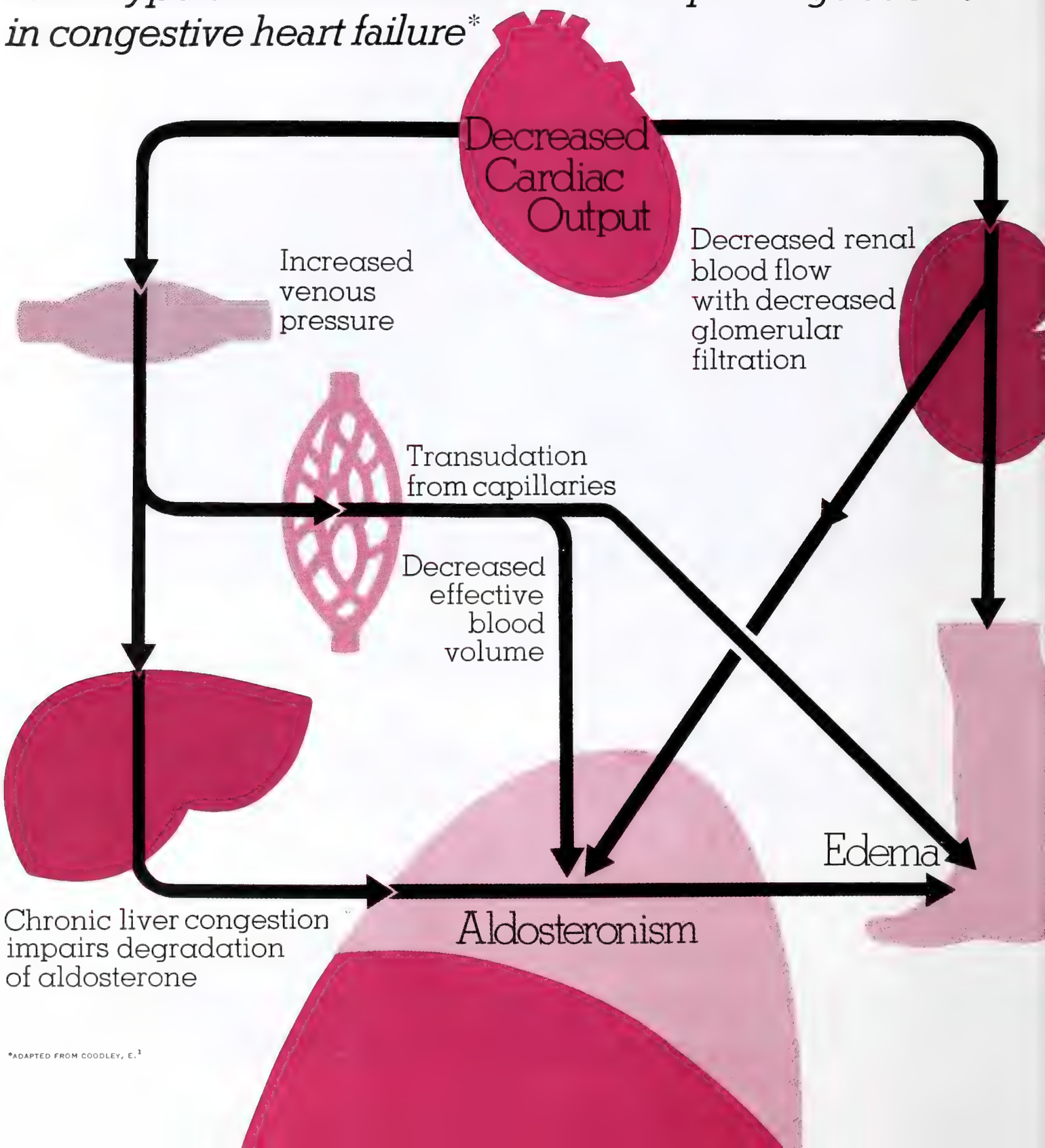

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Indications—Essential hypertension; edema or ascites of congestive heart failure, cirrhosis of the liver and the nephrotic syndrome; idiopathic edema. Some patients with malignant effusions may benefit from Aldactone (spironolactone), particularly when given with a thiazide diuretic.

Contraindications—Acute renal insufficiency, rapidly progressing impairment of renal function, anuria and hyperkalemia.

Warnings—Potassium supplementation may cause hyperkalemia and is not indicated unless a glucocorticoid is also given. Discontinue potassium supplementation if hyperkalemia develops. **Usage of any drug in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the mother and fetus.**

Precautions—Patients should be checked carefully since electrolyte imbalance may occur. Although usually insignificant, hyperkalemia may be serious when renal impairment exists; deaths have occurred. Hyponatremia, manifested by dryness of the mouth, thirst, lethargy and drowsiness, together with a low serum sodium may be caused or aggravated, especially when Aldactone is combined with other diuretics. Elevation of BUN may occur, especially when pretreatment hyperazotemia exists. Mild acidosis may occur. Reduce the dosage of other antihypertensive drugs, particularly the ganglionic blocking agents, by at least 50 percent when adding Aldactone since it may potentiate their action.

Adverse Reactions—Drowsiness, lethargy, headache, diarrhea and other gastrointestinal symptoms, maculopapular or erythematous cutaneous eruptions, urticaria, mental confusion, drug fever, ataxia, gynecomastia, inability to achieve or maintain erection, mild androgenic effects, including hirsutism, irregular menses and deepening voice. Adverse reactions are infrequent and usually reversible.

Dosage and Administration—For **essential hypertension** in **adults** the daily dosage is 50 to 100 mg. in divided doses. Aldactone may be combined with a thiazide diuretic if necessary. Continue treatment for two weeks or longer since an adequate response may not occur sooner. Adjust subsequent dosage according to response of patient

For edema, ascites or **effusions** in **adults** initial daily dosage is 100 mg. in divided doses. Continue medication for at least five days to determine diuretic response; add a thiazide or organic mercurial if adequate diuretic response has not occurred. Aldactone dosage should not be changed when other therapy is added. A daily dosage of Aldactone considerably greater than 75 mg. may be given if necessary.

A glucocorticoid, such as 15 to 20 mg. of prednisone daily, may be desirable for patients with extremely resistant edema which does not respond adequately to Aldactone and a conventional diuretic. Observe the usual precautions applicable to glucocorticoid therapy; supplemental potassium will usually be necessary. Such patients frequently have an associated hyponatremia—restriction of fluid intake to 1 liter per day or administration of mannitol or urea may be necessary (these measures are contraindicated in patients with uremia or severely impaired renal function). Mannitol is contraindicated in patients with congestive heart failure, and urea is contraindicated with a history or signs of hepatic coma unless the patient is receiving antibiotics orally to "sterilize" the gastrointestinal tract.

Glucocorticoids should probably be given first to patients with nephrosis since Aldactone, although useful for diuresis, will not directly affect the basic pathologic process

For **children** the daily dosage should provide 1.5 mg. of Aldactone per pound of body weight

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Early results of parietal cell vagotomy without drainage in the treatment of duodenal ulcer

Paul H. Jordan, Jr., MD

Parietal cell vagotomy (PCV) without drainage was performed in 35 patients undergoing elective operation for duodenal ulcer. Of these, 32 have been evaluated at two months and 17 at six months after operation. There have been no problems with gastric retention and no recurrent duodenal ulcers. At six months the basal acid output, insulin acid output, and maximal acid output have been reduced 78.4%, 92.2%, and 59.5%, respectively, compared with the preoperative values. Five patients (30%) had a positive insulin test at six months. Mild dumping occurred in 9% and diarrhea in 3%. Thus far, all patients are satisfied with their operations. Our data supports the evidence of others that PCV without drainage may be a valuable operation in the treatment of duodenal ulcer. At least five-year follow-up studies and preferably several prospective studies comparing PCV with other standard operations are necessary before the superiority of this operation can be established.

Truncal vagotomy as a part of the surgical treatment of duodenal ulcer has become widely accepted since its introduction by Dragstedt and Owens.[1] The combination of vagotomy and a drainage operation is praised by many and condemned by others. An intermediate position is that the procedure has great merit but is not the panacea for treatment of duodenal ulcer. Three major problems are responsible for unsatisfactory results of truncal vagotomy and drainage procedures. These include (1) episodic diarrhea which is in some way connected with truncal vagotomy, (2) the dumping syndrome which is a consequence of unregulated emptying of the stomach after loss of the pyloroantral mechanism, and (3) the high rate of recurrent ulcer due to inadequate reduction of acid secretion.

In an attempt to modify the effects of vagotomy, Jackson[2] and Franksson[3] independently performed studies to evaluate the possibility of vagotomizing the stomach while sparing the extragastric vagi supplying the remaining intra-abdominal organs. Although this procedure appears to be more rational than truncal vagotomy, its value with respect to improved gastrointestinal function has not been documented. Whether the incidence of episodic diarrhea associated with truncal vagotomy is diminished by bilateral selective vagotomy also is debatable. Regardless of its questionable physiological benefits, some surgeons prefer bilateral selective vagotomy because they believe that it results in a higher incidence of complete vagal denervation of the stomach than does truncal vagotomy.[4]

Griffith and Harkins,[5] also concerned about the shortcomings of truncal vagotomy combined with a drainage procedure, studied the possibility of vagotomizing only the parietal cell mass (PCV) in dogs without performing a drainage operation. Their experiments demonstrated that this type of vagotomy was feasible and that preservation of antral innervation prevented gastric stasis, making a drainage procedure unnecessary. The operation was not used clinically, however, because it was only partially successful in eliminating the secretory response to insulin.

Amdrup and Griffith[6] restudied the procedure hoping that they could devise an operation that would control the duodenal ulcer diathesis and at the same time prevent the dumping syndrome by preservation of the pyloroantral mechanism. Their studies showed that the stomach emptied adequately after PCV without drainage, and that the postoperative insulin responses were satisfactory. They concluded that the operation would decrease dumping, but they were concerned that it might not provide adequate control of

the duodenal ulcer diathesis because of the secretory potential of the innervated antrum. In spite of this concern there is evidence that PCV and truncal vagotomy are equally effective in reducing acid secretion and may actually preserve important defense mechanisms.[7-9] Clinical trials using the operation were begun and the next year Amdrup[10] and Johnston[11] reported their early results with PCV without drainage. Since then, many investigators have reported limited experience with the operation while Johnston et al[12, 13] have reported impressive results on increasing numbers of patients.

Because of the investigations that preceded the clinical application of the operation and the early good clinical results, we initiated a preliminary evaluation of the procedure. This report records the results obtained after PCV without drainage performed on 35 patients with duodenal ulcer and studied two and six months after operation. Because our early good results were consistent with other published reports,[12-15] we have begun a prospective, randomized study comparing the results of PCV without drainage and bilateral selective vagotomy, antrectomy, and Billroth I anastomosis.

Methods

Between June 1972 and March 1973, 35 consecutive male patients with chronic duodenal ulcer who demonstrated no significant pyloric obstruction preoperatively were treated by PCV without a drainage procedure. The diagnosis of duodenal ulcer was made on clinical and radiological evidence, and was confirmed by gastroscopy and duodenoscopy when in doubt. All patients underwent elective operation. No patient was excluded from the study because of obesity and it was unnecessary to deviate from the operative plan in any patient.

Preoperative and Postoperative Studies

Maximal acid output (MAO) was measured by collecting gastric juice continuously at 15-minute intervals for two hours after Histalog stimulation (betazole 1.2 mg/kg of body weight). The insulin acid output (IAO) was measured for two hours after administration of 0.2 units regular insulin per kg of body weight. The test was considered valid if the blood glucose level fell 50% and was below 40 mg/100 ml. Each test was preceded by a two-hour collection of gastric juice under basal conditions. Each 15-minute sample of gastric juice was titrated with 0.1 N NaOH to pH 7.3. These tests were performed on each patient preoperatively and repeated at two and six months after operation. The patients were hospitalized for these studies to make certain that they received no medications and were properly fasted. Overnight gastric residuals were measured before patients left the hospital after operation and at each study interval. Roentgenograms of the upper gastrointestinal tract were made prior to initial discharge from the hospital, two months after operation, and subsequently only if significant retention of barium had occurred on a previous study or if there was any question of gastric retention.

Operative Technique

The abdomen was opened through a midline incision and thoroughly inspected. The estimated size of the pylorus, determined by palpation, was correlated with the volume of air in the balloon of a Miller-Abbott tube that could be withdrawn through the pylorus. If the pylorus accommodated the thumb and forefinger, the balloon, containing at least 25 ml of air, could be withdrawn. This proved to be an adequate sized lumen and was called marginally adequate. None of the patients studied had a pylorus of smaller size. If the pylorus accommodated a balloon with 30-40 ml of air it was called adequate, and if it accommodated more than 40 ml of air it was considered widely patent. The liga-

ment of the left lobe of the liver was cut and the lobe retracted to the right. The peritoneum at the esophagogastric junction was incised and the anterior vagus nerve isolated with an umbilical tape. With slight traction on the nerve trunk, the hepatic branches and the nerve of Latarjet were easily identified. The latter runs parallel and close to the lesser curvature of the stomach until it passes onto the stomach 4 to 6 cm from the pylorus at the incisura angularis. Beginning at this point and proceeding cephalad toward the esophagogastric junction, taking precaution all the time to avoid injury to the anterior nerve of Latarjet, the anterior leaf of the lesser omentum was clamped, cut and ligated. After complete transection of the anterior leaf, the posterior vagus nerve was isolated and taped. This was done by retraction of the esophagus to the left and the right crus of the diaphragm to the right, thus exposing the vagus nerve as it coursed over the aorta. An opening was made in the gastrocolic omentum and adhesions between the stomach and pancreas were removed. With traction on the greater curvature of the stomach, the posterior leaf of the gastrohepatic omentum, beginning at the incisura, was divided. This was continued cephalad in progressive steps until the lesser curvature of the stomach was freed to the esophagogastric junction. Caution was taken to remove the uppermost branches of the vagus which appeared to be going to the esophagus but in fact supplied the most proximal portion of the stomach. The lesser curvature of the stomach was reperitonealized by approximating the posterior and anterior leaves of the lesser omentum attached to the stomach. This aided hemostasis and may inhibit reinnervation of the stomach by regrowth of the vagi. The phrenoesophageal ligament was attached to the diaphragm. Denervation of the parietal cell mass was confirmed by testing the gastric mucosa pH with a probe after Histalog stimulation.

Results

Three of our 35 patients failed to return at two months, thus 32 patients were followed a minimum of two months and so far 17 have been followed six months.

Preoperatively, the mean basal acid output (BAO) was 8.5± SD 6.0 mEq/2 hours. The mean MAO was 67.8± SD 21.3 mEq/2 hours, and the mean IAO was 41.2± SD 18.7 mEq/2 hours. The preoperative serum gastrin and serum calcium levels were normal in all patients, and a duodenal ulcer was confirmed in each patient at operation. The lumen of the pylorus just admitted the thumb and forefinger in eight patients and was considered marginally adequate. In 13 patients, the pylorus was narrowed but adequate, and in 14 it was widely patent. Six patients required blood transfusions during operation. In four of the six patients, blood was necessary because of bleeding encountered during operation. The anterior vagus was injured accidentally in one patient and the posterior vagus in another.

The pH of the mucosa just above the point of denervation on the lesser curvature, separating the antrum from the fundus, was 5.0± SD 1.4, and just below it was 6.2± SD 1.1. The average pH at the fundus was 4.5± SD 1.1. The pH just above the point of denervation was <4.0 in only four patients. In each of these, except for one, the pH encountered just below the line of denervation was 6.0 or greater. In the one exception the pH of the distal antral mucosa was 2, and biopsy from the distal antrum revealed large numbers of parietal cells. Reduction in response to the postoperative secretory tests was adequate in this patient. The rather sharp change in the pH, above and below the point of denervation, was considered satisfactory evidence that the parietal cell mass had been adequately denervated without producing excessive denervation of the antrum.

Additional operative procedures performed during vagotomy included appendectomy in nine patients, splenectomy in four, cholecystectomy in two, hiatal herniorrhaphy in one, and incisional herniorrhaphy in one. The early postoperative complications included five superficial wound infections and one wound dehiscence. Two patients who had wound infections and the

one who had a wound dehiscence also had splenectomy and/or appendectomy. Wound infections were also attributed to the intragastric manipulations to test the size of the pylorus and the pH of the gastric mucosa. All patients except for the one with wound dehiscence were started on a soft diet by the ninth postoperative day, and he was started on the 15th day. The length of hospitalization was 11.1± SD 5.1 days. Three patients whose hospitalization exceeded two weeks were kept 20 to 27 days because of wound infections or a wound dehiscence.

The roentgenograms of five patients at the time of their discharge from the hospital postoperatively revealed significant gastric retention of barium after two hours. The anterior vagus was injured in one of these patients and the lumen of his pylorus was smaller than in any of the other patients. At operation the pyloric lumen of the other four patients were considered adequate in two and widely patent in two.

The overnight gastric residual was 41.8± SD 34.2 ml at the time of discharge from the hospital. In four patients the gastric residual ranged from 100 ml to 135 ml. Three of these patients were among the five who also had some barium retention on their roentgenograms. The other two patients with barium retention at two hours had insignificant overnight gastric residual. At the time of discharge one patient complained of mild dysphagia and one of early satiety. None complained of nausea, vomiting, or gastric distress of any kind.

Two-Month Follow-Up

Each patient was queried about early fullness, nausea and vomiting, dysphagia, symptoms of early or late dumping, appetite, necessity for diet restrictions, symptoms of ulcer, need for antacids, diarrhea or any change of bowel habits. Eleven of the 32 patients had mild symptoms (Fig 1). Five patients had early satiety and one had vomiting if he overate, yet none of these patients demonstrated barium retention on roentgenograms. Barium passed slowly from the stomachs of six other patients who did have significant retention at two hours although their overnight residuals were insignificant. The overnight gastric residual for all patients was 32.9± SD 38.0 ml. It was 110 ml and 190 ml in two patients, neither of whom had retention of barium. None of those who showed any degree of gastric retention had symptoms. Three patients had early dumping and in one of these patients the symptoms of dumping had been present preoperatively. There was a tendency for stools to be softer than before surgery yet no patient developed diarrhea. Two patients had one to two liquid stools a day; however, this pattern was no different from what it had been before operation.

Two months after operation, 14 patients had returned to full employment, 2 to part-time work, and 17 had not returned to work. Twenty-eight patients considered themselves to be in excellent condition and four thought they were better. No patient was dissatisfied with the results of operation. Two unrelated late complications, appendicitis and intestinal obstruction, required reoperation. Only three patients lost weight after their discharge from the hospital. Two patients lost 1 lb and one overweight patient lost 8 lb. The BAO was 1.7± SD 2.5 mEq/2 hours. This represented an 87.4% decrease over the preoperative value. The MAO was 24.3± SD 17.4 mEq/2 hours, which was 63.9% less than the preoperative value. The insulin response was positive in nine patients. Eight of these were late positive and only one was an early positive response. The average IAO was 2.0± SD 2.8 mEq/2 hours, which was a decrease of 95.2% over the preoperative value.

Six-Month Follow-Up

At the time of this report 17 patients had been studied six months after operation.

Four patients had symptoms (Fig 2) although 15 of the 17 patients thought they had obtained excellent results from operation. One patient was better and one had an unresolved problem. This last patient had a duodenal and a gastric ulcer when he underwent operation. Two months after operation his condition was excellent. Between two and six months following operation, he began taking large amounts of aspirin for "arthritis." He returned to the hospital because of gastric symptoms related to reactivation of his gastric ulcer. The cause of the patient's arthritis, septic course, and weight loss remains unresolved. For this reason no further surgery was performed. Four of the 11 patients who had symptoms at two months were seen again at six months. The patient with dysphagia and the one nauseated by milk were asymptomatic. One patient continued to have early dumping and, in addition, diarrhea. He was an alcoholic and it was thought that the diarrhea was related to his alcoholic binges. The fourth patient, bothered by gas at two months, had late dumping at six months. The remaining patients had no diarrhea, no symptoms or roentgenographic evidence of gastric retention, and no significant overnight gastric residual. All had returned to work. Fourteen of 17 patients showed a weight gain between the two-month and six-month evaluations. The three patients losing weight lost 1, 2, and 4 lb. All the patients with symptoms (Fig 2) had gained 3 to 9 lb over their preoperative weight. The BAO was reduced 78.4%; the MAO 59.5% and the IAO 92.2% over the preoperative values. Five patients (30%) had a positive insulin test. Four were late positive and one was early positive. All of those who had positive tests at six months also had positive tests at two months.

Discussion

Reduction of acid and pepsin secretion is the principle upon which operative treatment of duodenal ulcer is dependent. This objective is accomplished by removal of the parietal cell mass, removal of the antrum, vagus section, or some combination of these three procedures. Several prospective studies to evaluate the results of different operations have reached the unexpected conclusion that, except for an increased number of recurrent ulcers after vagotomy and drainage, there is little difference in the results obtained with the operations most frequently used.

Major complications are associated with each established operative procedure. First, mortality is increased in patients undergoing gastric resection when there is an intense inflammatory response in the vicinity of the ulcer making dissection of the duodenum difficult. Second, dumping and other alimentary symptoms occur frequently after the removal, destruction, or bypass of the pyloroantral mechanism that normally permits intermittent discharge of small aliquots of chyme from the stomach and prevents reflux of duodenal contents into the stomach. Third, episodic diarrhea is frequently associated with truncal vagotomy in combination with any gastric procedure. Finally, recurrent ulcer is a major complication of operations that fail to reduce acid secretion adequately. One would expect that the first three complications could be avoided by PCV without drainage. In fact, our study demonstrates a reduction in the prevalence of dumping and diarrhea following PCV without drainage, which confirms similar results observed by Johnston[15] in patients studied up to two and one-half years after operation. The successful prevention of recurrent ulcer depends on an adequate and persistently maintained reduction of acid secretion. Only after patients have been studied closely for a prolonged period can

1. Symptoms in 32 patients at two-month follow-up after PCV without drainage.

Symptoms	No. Patients	Status of Symptoms
Early satiety	5	Of no significance; patients maintaining or gaining weight
Early dumping	3	Mild, of no consequence
Dysphagia	1	Mild, improving
Nausea	1	With milk only
Vomiting	1	Occasional, must avoid excessive eating to prevent

it be determined whether this objective was achieved.

There are two potential problems associated with PCV without drainage. The first is unsatisfactory emptying of the stomach due to cicatricial narrowing of the pylorus secondary to the ulcer or loss of antral motility due to its excessive denervation. Our results indicate that a stomach showing no evidence of obstruction preoperatively will empty satisfactorily if the antrum is not excessively denervated even though the pylorus will accept only a thumb and forefinger at the time of operation. If the pylorus is widely patent at operation, denervation of the antrum probably can be less precise without causing gastric retention.

Several investigations on antral mobility after PCV have been made because of the concern that the stomach might not empty satisfactorily if the drainage procedure was not also performed. Klempa et al[16] demonstrated that antral motility decreased as denervation of the antrum was progressively increased, and Bass et al[17] showed that the contractility of the antrum was not significantly altered after PCV. Kelly[18] reported that the antrum in man displayed normal high amplitude, propulsive waves in response to feeding after PCV. Wilbur and Kelly[19] also concluded that gastric emptying of spheres (solids) was unaltered after PCV without drainage because terminal antral contractions remained normal. Thus both clinical and animal observations indicate that, in contrast to complete gastric vagotomy, PCV of the stomach can be done without adversely affecting gastric emptying. Therefore, when the size of the pyloric lumen is adequate and the antrum remains innervated, patients may be expected to empty their stomachs satisfactorily after PCV without drainage. Our patients who had gastric retention of barium did not have clinical symptoms of gastric retention or have significant overnight gastric residual. This observation might be explained on the basis of studies by Wilbur and Kelly[19] which suggested that gastric emptying of liquids is controlled by gastric transmural pressure of the vagally innervated fundus, while the gastric emptying of solids is regulated by the terminal antral contractions of the vagally innervated antrum.

The other potential disadvantage of PCV without drainage is inadequate reduction of acid secretion due to retention of an innervated antrum. That this might occur was suggested by Amdrup's[6] report that acid secretion from a Heidenhain pouch was 47% greater after PCV with drainage than after total gastric vagotomy without drainage. In contrast to these laboratory results, Johnston et al[20] demonstrated that acid output of patients in response to a meal was no different after PCV without drainage than after bilateral selective vagotomy without drainage. Their study suggested that the gastric antrum need not be vagally denervated provided it is well drained and in continuity with the "acid stream." There is still concern that retention of an innervated antrum may be a potential liability because of vagally released gastrin and the increased sensitivity of innervated antral mucosa to chemical stimuli.[21] These factors may be offset by acid inhibition of antral gastrin release. In addition, vagally released gastrin has not been demonstrated in man to be of major importance in promoting gastric secretion in response to vagal stimulation as it has been in dogs. On the contrary, vagally released gastrin may have only a minor role in the vagal phase of gastric secretion in man.[22] Other investigators[7,9,23] have presented evidence that the innervated antrum may inhibit acid secretion and in fact be an asset rather than a liability. At the present time there is not good evidence that retention of the innervated antrum in the duodenal ulcer patient has a beneficial or an adverse effect on acid secretion.

Although the effect of an innervated antrum on gastric secretion is unclear,

there is good evidence for an inhibitory effect of the extragastric vagi on gastric secretion. For example, the response of denervated parietal cells to a feeding stimulus or to exogenous gastrin is greatly increased by extragastric vagotomy in dogs.[8] It is thought that this effect is due to the loss of a vagally released inhibitor substance and not to an increased release of gastrin due to antral stasis.[24] It is not known whether inhibition of acid secretion by the extragastric vagi observed in dogs also occurs in man.

In a previous study employing truncal vagotomy, we reported a 13% incidence of significant diarrhea.[25] In the present study no patient had diarrhea of a similar magnitude. At two months the only patient who had any diarrhea also had had his posterior vagus nerve inadvertently cut at operation. He has not been seen yet for a six-months follow-up. Our incidence of diarrhea at two months (3%) corresponds closely with the 2% reported by Johnston[15] after PCV. At six months, only one of 17 patients had diarrhea of any magnitude. This was a confirmed alcoholic who had two episodes of diarrhea per month, consisting of five to six liquid stools a day for one to two days. It is possible that his diarrhea was associated with alcoholic binges. The patient in whom the anterior vagus nerve was cut had no diarrhea. Although diarrhea was not a complication of PCV, several patients were pleased that they had become less constipated after operation.

The incidence and severity of dumping was also low in this study. At two months three patients had early dumping, one of these was with milk alone and the other two occurred with "sweets." In one of the latter cases, the posterior vagus nerve was injured. The symptoms in these three patients were mild and of no concern to the patients. One of the 17 patients seen at six months had mild early dumping. He was the same patient who had symptoms only with milk at two months. Thus far, our incidence of mild dumping with PCV without drainage is 9% at two months and 6% at six months, which is similar to the 6% reported by Humphrey and associates.[14]

At six months the average reduction in the IAO compared with the preoperative value was 92.2%, and 5 of 17 (30%) patients had a positive insulin test compared with 54% of patients at one year in Johnston's series.[13] The BAO was reduced 78.4% and the MAO 59.5%, which compare favorably with reductions of 87 and 55%, respectively, reported by Johnston et al.[12] While it is too early to know the recurrent ulcer rate after PCV, the fact that we have encountered no recurrences in 17 patients studied at six months is encouraging. On this basis, it is reasonable to continue a clinical evaluation of a procedure which has been stated by others to have a recurrence rate of less than 1% in 280 patients followed for a maximum of 44 months.[12] Holle[7] also reported a recurrence rate of less than 1% in 171 patients whom he studied for as long as seven years after PCV and a drainage procedure. Since

2. Symptoms in 17 patients at six-month follow-up after PCV without drainage.

Patient Identification	Diarrhea	Overnight Gastric Residual	X-Ray Retention of Barium	Symptoms	Work Status	Lb Gained After Discharge	Evaluation of Operation
5	No	35 ml	No	Recurrent gastric ulcer	No	3	Severe arthritis, evaluation pending
9	No	27 ml	No	Late dumping 3x/week	Can't find work	9	Excellent
13	Yes 2x/month, 1-2 days, 5-6x/day	26 ml		Early dumping with milk	Yes	10	Excellent
19	No	142 ml	Yes	Early fullness	Yes	7	Excellent

the stomach appears to empty satisfactorily after PCV without drainage, there is reason to believe that the latter procedure will be as satisfactory as PCV with drainage in the prevention of recurrent ulcer, and superior in the prevention of dumping, diarrhea and other postoperative gastric symptoms.

We conclude at this time that our data support the accumulating evidence of others that PCV, also called highly selective vagotomy, may be a valuable operation in the treatment of duodenal ulcer. The operation has not been used long enough for us to know if its early predictions will stand the test of time. We do know, however, that other ulcerogenic operations have demonstrated their proclivity toward recurrent ulcer in less time than PCV has already been used. On the other hand, as long as 15 years was necessary for many patients undergoing gastroenterostomy alone to develop recurrent ulcer. One must, therefore, be cautious in the adoption of a new operation. PCV is appealing because of its relative simplicity and paucity of undesirable gastrointestinal symptoms. At least five-year follow-up studies and several prospective studies comparing PCV with other standard operations are necessary before the superiority of this operation can be established.

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- conserves potassium
- reduces the risk of digitalis intoxication due to potassium depletion. Potassium depletion sensitizes the myocardium to the toxic effects of digitalis, and reduces its inotropic effect.

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

MEETS THE HEARTFELT NEED OF THE DIGITALIZED PATIENT

The Weight of Professional Opinion

It's time for action to defend the laws and regulations that protect your patients against drug substitution.

These professional and trade organizations are united in supporting antisubstitution statutes and regulations:

The American Academy of Dermatology

The Board of Directors of the American Academy of Family Physicians

The Executive Board of the American Academy of Neurology

The Committee on Drugs of the American Academy of Pediatrics

The American College of Allergists

The Executive Committee of the American College of Obstetricians and Gynecologists

The Board of Regents of the American College of Physicians

The Board of Trustees of the American Dental Association

The Board of Trustees of the American Medical Association

The American Psychiatric Association

The Executive Committee of the National Association of Retail Druggists

The Board of Directors of the Pharmaceutical Manufacturers Association

The National Wholesale Druggists' Association

Joint Statement on Antisubstitution Laws and Regulations

The purpose of this statement is to affirm the support of the participating organizations for the laws, regulations and professional traditions which prohibit the unauthorized substitution of drug products.

Traditionally, physicians, dentists and pharmacists have worked cooperatively to serve the best interests of patients. Productive cooperation has been achieved through mutual respect as well as a common concern for the ideals of public service. This mutual respect has been reflected, in part, by joint support over the years for the adoption and enforcement of laws and regulations specifically prohibiting unauthorized substitution and encouraging joint discussion and selection of the source of supply of drug products. The basic principles of medical, dental and pharmacy practice are thus utilized and preserved in the interest of patient welfare.

The antisubstitution laws have not obstructed enhancement of the professional status of pharmacy any more than they have in and of themselves guaranteed absolute protection from unsafe drugs, or freed physicians, dentists and pharmacists from their responsibilities to patients. As a practical matter, however, such laws and regulations encourage interprofessional communications regarding drug product selection and assure each profession the opportunity to exercise fully its expertise in drug usage, to the advantage of patients.

Physicians and dentists should be urged to increase the frequency and regularity of their contacts with pharmacists in selection of quality drug products, recognizing that economies to patients can be improved through such communication, taking into account the patients' needs. The pharmacist's knowledge of the chemical characteristics of drugs, their mode of action, toxic properties and other characteristics that assist in making drug selection decisions should be utilized to the fullest extent practicable by physicians and dentists in serving their patients.

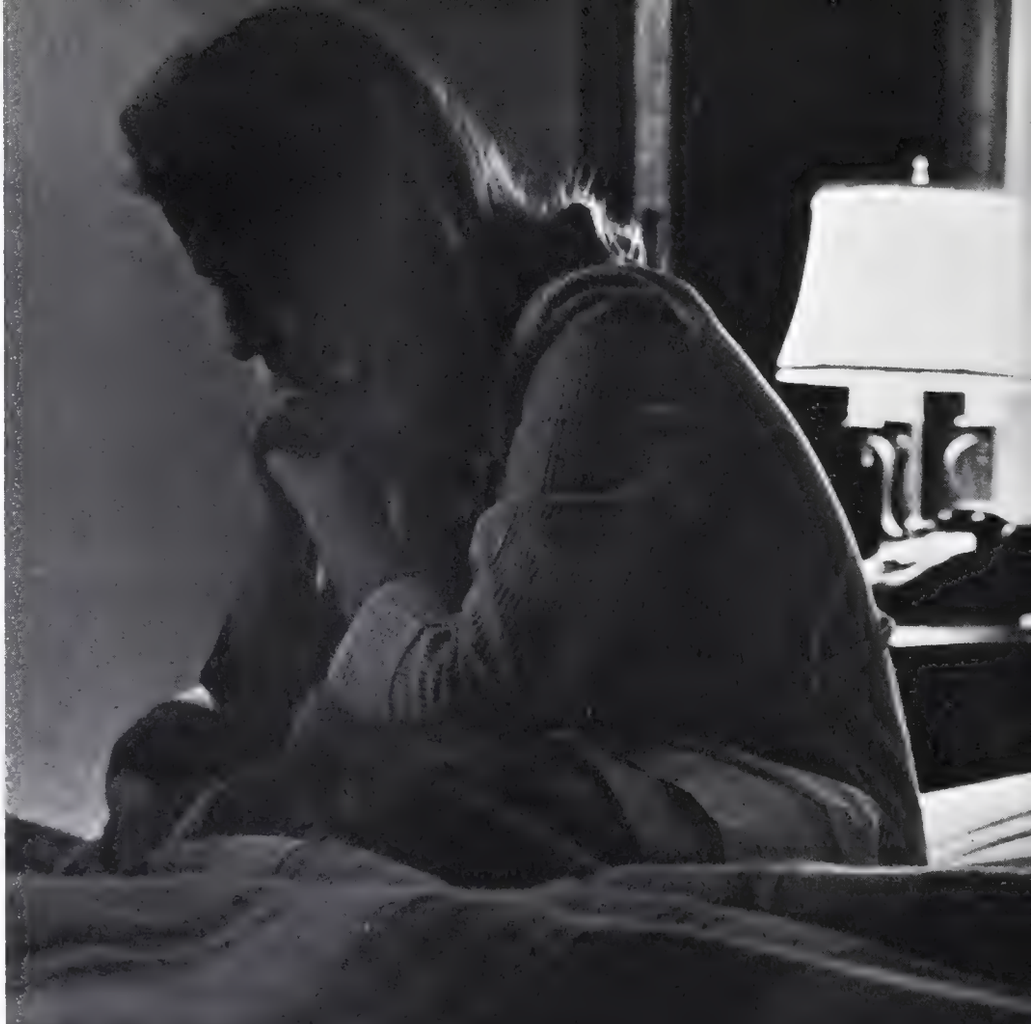
Since drug product selection entails knowledge derived from clinical experience, the physician's and dentist's roles in product selection remain primary and do not permit delegation of decisions requiring medical and dental judgments. A broader role in therapy will evolve for pharmacists as improved understanding and cooperation among the professions continue to grow.

There has been no evidence that there are convincing reasons to modify or repeal existing laws and regulations prohibiting the unauthorized substitution of another drug product for the one specified by a prescriber. It is our belief that such laws and regulations merit the joint support of the medical, dental and pharmaceutical professions and the pharmaceutical industry.

Add your opinion to the weight of other professionals and send it to your state assemblyman or legislator.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D. C. 20005

P·M·A



Placidyl®
(ETHCHLORVYNOL)

Brief Summary

Indications—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

Contraindications—Drug hypersensitivity and porphyria.

Warnings—Not recommended during the first and second trimester of pregnancy. Caution patients of possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in blurring of vision, paralysis of accommodation and profound hypnosis. Caution patients concerning driving a motor vehicle, operating machinery, or other hazardous operations requiring alertness after taking the drug. Administer with caution to patients with suicidal tendencies and do not prescribe large quantities of the drug. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY OVER A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible early withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, slurring of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other less well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

Precautions—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitryptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient giddiness or ataxia may occur.

Adverse Reactions—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, dizziness, facial numbness, and allergic reaction typified by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 302430R

Give us her nights.

Prescribe Placidyl. Chances are, we'll give her a good night's sleep.

Insomnia is often associated with emotional disturbance. Emotional problems might be the cause . . . or the effect. In time that can be determined. But tonight, one fact is painfully clear: she needs sleep.

When sleep is synonymous with therapy, remember . . . Placidyl is synonymous with sleep. It has been for over 17 years.

If time is the criterion to inspire your confidence... you can rest assured with Placidyl.

Prescribed by physicians for over 17 years.

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(ETHCHLORVYNOL CAPSULES, 500 or 750 mg.)

C IV

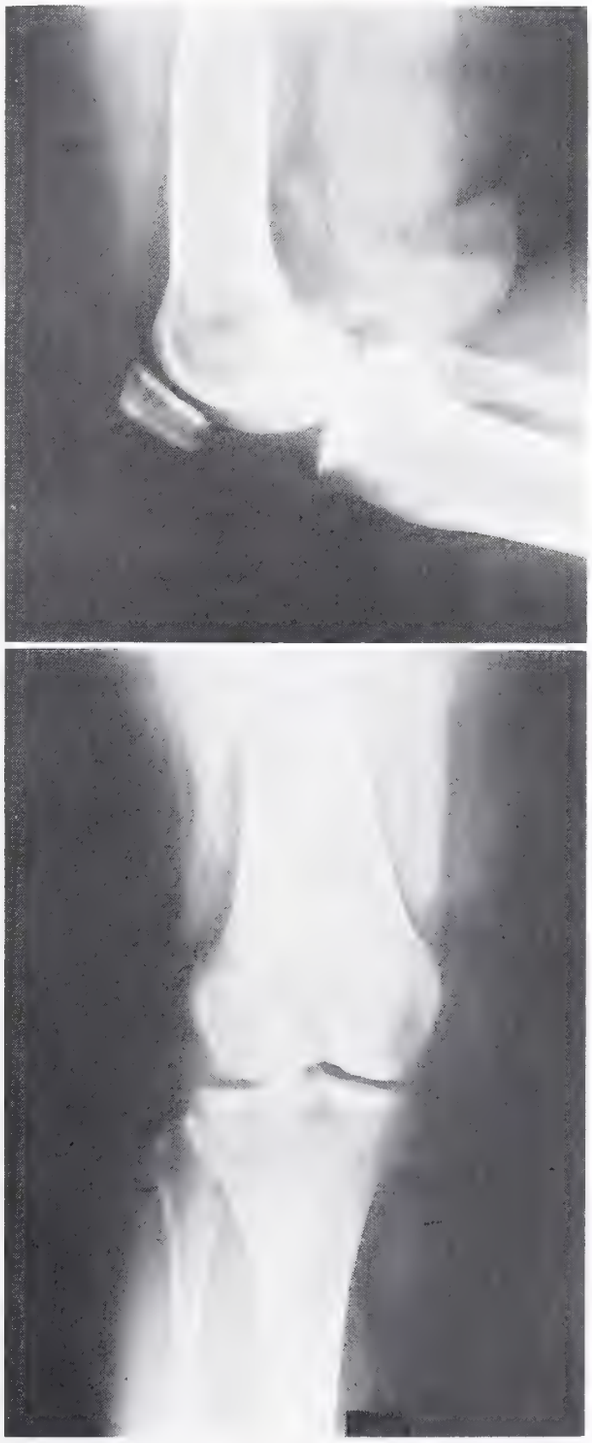
Intraosseous ganglion cyst of the patella: Report of a case

Terrence E. Carter, MD; Lee C. Detenbeck, MD

Intraosseous ganglion cysts are rare. Hicks described the first case in 1956, and six cases recently reported[1] bring the total to 34. Lesions of the patella are equally uncommon.[2] This is the first reported case of ganglion cyst of the patella, and the report adds this cyst to the list of lesions that may occur in the patella.

Report of Case

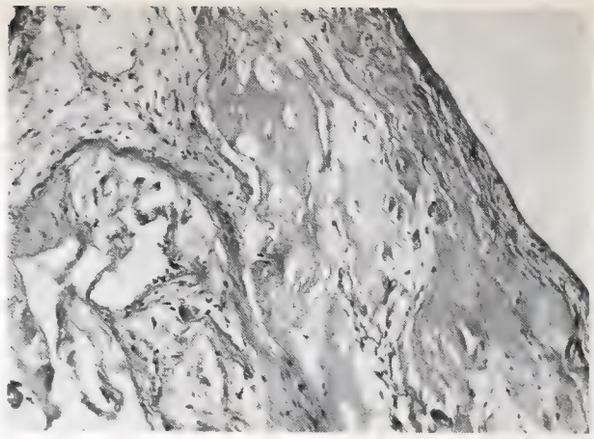
A 61-year-old woman first noted pain in her right knee in 1968, immediately after a strenuous jogging episode. Twelve months later she was seen at the Mayo Clinic for unrelated medical problems, and she complained of an aching pain, generalized in the right knee and present only when ascending stairs. Roentgenograms obtained in July 1969 (Fig 1) showed no abnormality, and no treatment was advised. She returned in December 1971 with continued complaints of pain in the right knee—described as a dull ache—when ascending or descending stairs. Repeat roentgenograms (Fig 2) demonstrated evidence of a cystic lesion with distinct borders in the proximal pole of the patella; biopsy was advised. At operation, the anterior surface of the patella was exposed through a median parapatellar incision, and a window was removed from the anterior cortex. A mucin-filled cystic cavity, 1.5 cm in diameter, was found lined by tissue that was histologically consistent with that of a ganglion cyst (Fig 3).



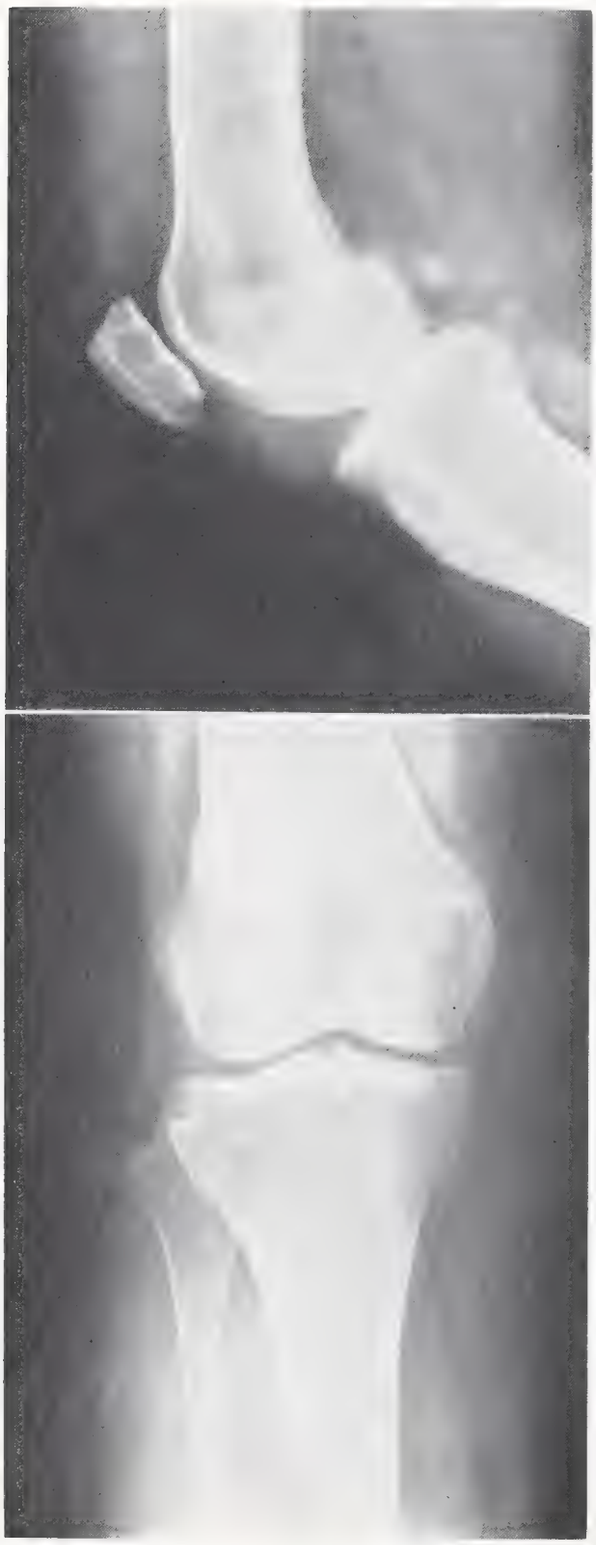
1. Roentgenogram of right knee (July 1969).

Comment

This case brings to 35 the number of reported cases of intraosseous ganglion cysts. It is the first reported occurrence in the patella. The more freqent sites have been the distal tibia[1,3-7] and talus.[1,3,5] The ulna,[3,5] carpal bones, [3,4] proximal



3. Thick collagenous wall of cyst. Hematoxylin and eosin, X 85.



2. Roentgenogram of right knee (December 1971) demonstrating cystic lesion in proximal pole of patella.

tibia,[3,5,7] fibula,[1] femur,[3,8] and tarsal bones[3] also have been reported as sites of these lesions.

As noted by Sim and Dahlin, the proximity of the cyst to the adjacent joint is a common feature. The main symptom of an intraosseous ganglion cyst commonly is aching in the joint associated with activity. Lesions of the patella frequently produce an aching pain localized anteriorly, and associated with activities that exert pressure on the patella.[2] A well-defined cystic lesion contained within bone without expansion of the bony contour is the common roentgenographic finding.[1,3,8]

The treatment recommended is simple curettage or curettage with bone grafting; either is effective in relieving the discomfort caused by these lesions.[1] Ganglion cyst should be added to the list of lesions considered in the differential diagnosis of cystic lesions in the patella.

Summary

The first case of a ganglion cyst of bone occurring in the patella is reported, and an awareness of this lesion in the differential diagnosis of cystic lesions of the patella is advised.

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The authors, Mayo Clinic and Mayo Foundation, Rochester Minn 55901.

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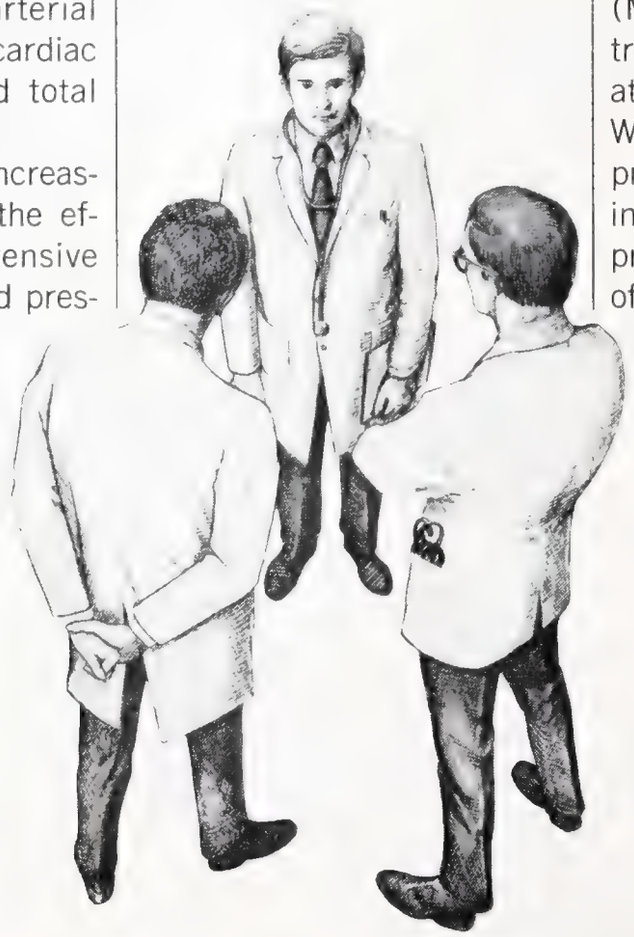
The more physicians consider the hemodynamics of lowering blood pressure...

Most physicians now agree on the importance of reducing blood pressure in the hypertensive patient. But high blood pressure exists, of course, only as part of a complete clinical picture. The hemodynamic profile of well-established essential hypertension is characterized by elevated arterial blood pressure, normal cardiac output, and increased total peripheral resistance.

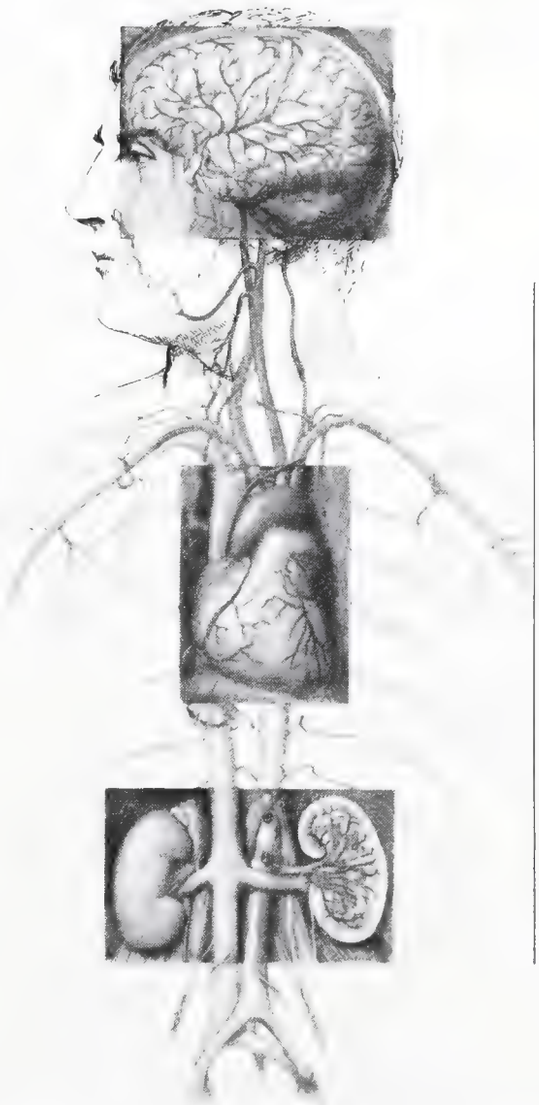
And so, physicians are increasingly concerned with the effects of an antihypertensive agent not only on blood pressure itself but also on the hemodynamic pattern—in short, with the total effect of the drug. *Does* it indeed help lower blood pressure effectively? *Is* peripheral resistance reduced? *Are* cardiac output and renal functions maintained? And, also, is there likely to be drug-induced postural hypotension serious enough to pose a threat to the patient's cerebrovascular status?



With this emphasis on overall drug performance has come a growing reliance on ALDOMET® (Methyldopa, MSD) in the treatment of sustained moderate hypertension.

With its unique hemodynamic profile, ALDOMET has drawn increasing attention and approval from physicians. First, of course, for its efficacy in

the more physicians rely on this unique antihypertensive



lowering blood pressure. But there are other considerations as well. Cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is actually slowed. Peripheral resistance is apparently reduced. ALDOMET does not usually compromise existing renal function; it generally does not reduce renal blood flow, glomerular filtration rate, or filtration fraction. And ALDOMET usually does not cause symptomatic postural or exercise hypotension.

Some patients on continuous methyldopa therapy may develop a positive direct Coombs test. For more details, see the brief summary of prescribing information.

Contraindicated in active hepatic disease and known sensitivity to the drug. Not recommended in pheochromocytoma or pregnancy. It should be used with caution in patients with a history of liver disease or dysfunction. Discontinue the drug if fever, abnormal liver function, jaundice, or acquired hemolytic anemia occurs.

In most cases of sustained moderate hypertension

TABLETS, 250 mg

ALDOMET®

(METHYLDOPA | MSD)

smoothly lowers blood pressure

For a brief summary of prescribing information, please see following page.

In most cases of sustained moderate hypertension

TABLETS, 250 mg

ALDOMET®
(METHYLDOPA MSD)

smoothly lowers blood pressure

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; known sensitivity. Not recommended in pheochromocytoma. Unsuitable in mild or labile hypertension responsive to mild sedation or thiazide therapy. Use cautiously in patients with history of previous liver disease or dysfunction.

Warnings: Acquired hemolytic anemia has occurred rarely in association with therapy with methyldopa. Should clinical symptoms indicate the possibility of anemia, hemoglobin and/or hematocrit determinations should be performed. If anemia is present, appropriate laboratory studies should be done to determine if hemolysis is present. Evidence of hemolytic anemia is an indication for discontinuation of the drug. Discontinuation of methyldopa alone or the initiation of adrenocortical steroids usually results in a prompt remission of the anemia. Rarely, however, fatalities have occurred.

Some patients on continued therapy with methyldopa develop a positive direct Coombs test; incidence reported has averaged between 10% and 20%. It rarely occurs in first six months of therapy, and if not seen within twelve months, is unlikely to develop with continued administration. Positive Coombs test is dose-related; lowest incidence occurs in patients on 1 g methyldopa or less per day. Reversal of the positive Coombs test occurs within weeks to months after discontinuation of methyldopa. Prior knowledge of a positive Coombs reaction aids in evaluation of cross match for transfusions. Patients with positive Coombs tests at time of cross match may exhibit incompatible minor cross match. When this occurs, an indirect Coombs test should be performed. If negative, transfusion with blood otherwise compatible in the major cross match may be carried out. If positive, advisability of transfusion with blood compatible in major cross match should be determined by hematologist or expert in transfusion problems.

Fever has occurred within first three weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first two to three months of therapy. Rare cases of fatal hepatic necrosis have been reported. Liver biopsy in several patients with liver dysfunction has shown microscopic focal necrosis compatible with drug hypersensitivity. Rarely, reversible reduction in leukocyte count with primary effect on granulocytes has been seen; reversible agranulocytosis has been reported. Methyldopa may interfere with measurement of creatinine by alkaline picrate method and of uric acid by phosphotungstate method. When used with other antihypertensive drugs, potentiation of antihypertensive action may occur.

Usage in Pregnancy and Childbearing Age—Not recommended in pregnancy. In women of childbearing age, weigh potential benefits against possible fetal hazards.

Precautions: Perform periodic hepatic function tests and white cell and differential blood counts during first six to twelve weeks of therapy or in unexplained fever. Discontinue if fever, abnormalities in liver function tests, or jaundice appears. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, spuriously high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. Discontinue drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Anesthetics requirements may be reduced; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension may occur after dialysis because methyldopa is removed by this procedure.

Dosage should be limited initially to 500 mg daily when following previous antihypertensive agents other than thiazides. Do not exceed recommended daily dose of 3.0 g. Patients with impaired renal function may respond to smaller doses than patients with normal kidney function. Syncope in older patients has been related to increased sensitivity in those with advanced arteriosclerotic vascular disease; this may be avoided by lower doses. Tolerance occasionally seen either early or late, but more likely between second and third month after initiation of therapy; increased dosage or combined therapy with a thiazide frequently restores effective control.

Adverse Reactions: Sedation, usually transient, may be seen during initial therapy or when dosage is increased. Headache, asthenia, or weakness may be noted as early, transient symptoms. Symptoms associated with effective lowering of blood pressure, including dizziness, lightheadedness, and symptoms of cerebrovascular insufficiency, are seen occasionally. Angina pectoris may be aggravated. Symptoms of orthostatic and exercise hypotension may occur; if symptoms occur, reduce dosage. Bradycardia, nasal stuffiness, mild dryness of mouth, and gastrointestinal symptoms including distension, constipation, flatus, and diarrhea occur occasionally; these can be relieved by reducing dosage. Nausea and vomiting have been reported in only a few patients. Sore tongue or "black tongue," pancreatitis, and inflammation of salivary glands may occur.

Weight gain and edema occur infrequently; if edema progresses or signs of pulmonary congestion appear, discontinue drug. Rarely, urine exposed to air may darken due to breakdown of methyldopa or its metabolites. Other rare reactions include breast enlargement, lactation, impotence, decreased libido, skin rash, mild arthralgia, myalgia, paresthesias, parkinsonism, psychic disturbances including nightmares, reversible mild psychoses or depression, reversible thrombocytopenia, drug-related fever and abnormal liver function studies with jaundice and hepatocellular damage (see **Warnings** and **Precautions**), rise in BUN, and a single case of bilateral Bell's palsy.

Supplied: Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000.

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Let's make blood pressure "required reading" for all physicians.

With recent estimates that about 23 million Americans have high blood pressure—and that half of them are not even aware of it—detection of the problem in asymptomatic persons has become an issue of national importance.

Family physicians are being urged to take blood pressure readings as a matter of office routine, regardless of the presenting complaint or the reason for the visit. And because many people do not see a family physician for relatively long periods of time, some experts are suggesting that ophthalmologists, gynecologists, dermatologists, orthopedists, psychiatrists, dentists, school nurses, family planning counselors, and other health-care personnel make blood pressure reading a routine part of every examination or consultation.

Of course, a diagnosis of hypertension cannot be made on the basis of a single reading, but routine blood pressure readings can uncover potential trouble in a certain proportion of patients. And when trouble is suggested, further evaluation can be pursued more effectively.

Blood pressure—"required reading" for all physicians.

Breast self-examination:

KEY ROLE OF THE PHYSICIAN

item:	**Breast cancer is a major concern of American women, according to a recent Gallup study conducted for the American Cancer Society.**
item:	**Although aware that early discovery improves the chances of cure, and that BSE can lead to early discovery, *fewer than 1 in 5* women practice BSE, and *only half* have an annual breast examination by a physician.**
item:	**Only 35% of all women polled reported that a *physician* had ever raised the subject of breast self-examination, and only 24% had received instruction from the physician on how to do it. Even among women who regularly see a gynecologist, only 34% had been instructed on BSE.**
item:	***But,* among women who received personal instruction from their physicians, the overwhelming majority *(92%)* practiced BSE during the preceding year.**

The Gallup study revealed that, far more important than increasing awareness of breast self-examination, is the problem of inducing women to practice it regularly. The physician plays a key role in this—by teaching women the correct technique, and instilling in them the confidence that will assure their continued practice of BSE.

The American Cancer Society gives major emphasis to breast cancer through research and a vast array of public educational materials, designed to give women life-saving information about the disease. Our latest approach is via a pioneering television film starring Jennifer O'Neill, "Breast Cancer: Where We Are." Where we *will* be in a few years will certainly hinge on our joint efforts.

American Cancer Society®

Houston offers spectrum of events for TMA 107th Annual Session

The biggest . . . the best . . . the most . . . Even allowing for some "Texas brags," the Texas Medical Association has organized for its 107th Annual Session May 9-12 in the Bayou City a superlative spectrum of professional and entertaining attractions.

Big and busy—that's what the Advance Program terms this Session. And a scan of the activities promises an atmosphere reflecting the spirit and excitement of the nation's sixth largest city. The TMA physician exploring the Houston metropolis will find opportunities from boutique shopping to outstanding cultural and social events.

Headquartered in the Shamrock Hilton and Astroworld Hotels, scientific and business sessions of the meeting will spotlight current issues, authoritative speakers, and a multitude of medically related subjects.

Featured speakers for the general luncheon meetings Friday and Saturday respectively include Dr. Russell B. Roth, president, American Medical Association, and W. Philip Gramm, PhD, professor of economics, Texas A&M University. Dr. Roth will discuss "Choosing the Legislative Rx for Medical Care." Dr. Gramm's topic will be "Energy, Inflation and Price Controls."

Astroworld Hotel—headquarters for business sessions.

Programming

Planning for the 1974 Annual Session has emphasized programs designed for physician participation. Scientific programming for the meeting includes symposiums featuring such topics as school health, cardiovascular diseases, emergency medical services, cancer, family practice, medicine and religion, sports medicine, maternal health, pediatric nutrition, obesity, renal disease and others. Cooperative programming will establish a greater liaison between the Association and specialty and related groups. Over 60 scientific sections, Association committees, specialty and related medical organizations will be participating in the meeting.

In connection with special features, a national and an international group will be represented at the Session. The Texas Dermatological Society has invited members of Sociedad Mexicana de Dermatologia to meet with them in Houston. In addition, the American Geriatrics Society will sponsor a symposium on geriatrics in collaboration with the TMA Committee on Aging.

Approximately 50 out-of-state guest speakers have been secured for meeting sessions. Also scheduled are the popular Curbstone Consultations and Continental Breakfast forums and a diverse selection of scientific and commercial exhibits.

Entertainment

Whether a doctor's preference is wine tasting, dining, dancing, or meeting with old friends, there will be social events to suit every taste at Annual Session. Numerous class reunions and fraternity parties are

Houston, a sprawling metropolis of 1,212,900, is the site of the 1974 Texas Medical Association Annual Session.

scheduled. Arrangements have been made with the Astroworld Hotel for a Saturday, May 11, party including cocktails, dinner, and dancing to the Ed Gerlach Orchestra. Tickets are $20 per person, with surplus funds to go to the Medical Student Loan Fund of the Woman's Auxiliary. Members of the Fifty Year Club and their spouses will be honored Friday, May 10, at the general meeting luncheon. Members of the Past Presidents Association will be honored at Saturday's luncheon.

Sports

For the sports fan, golf and tennis tournaments are planned. The tennis tournament is slated for Wednesday, May 8, at the Hess Tennis Stadium on the campus of Rice University. Events include men's open singles, men's senior singles (45 or older), men's open doubles, women's open singles, and women's open doubles. The golf tournament is set for Friday, May 10, at the Westwood Country Club. Trophies and prizes will be awarded. Advance reservations are necessary.

Houston has it all

For a lifetime resident or the visiting convention-goer, Houston offers the dichotomy of a cosmopolitan sophistication and a small town warmth. Annual Session hotels are conveniently located in respect to the sprawling city's many attractions. From the Port of Houston's "Fabulous 50 Miles" to the international air transportation hub of the Intercontinental Airport, Houston is constantly moving, changing, and growing. The city is renowned in many areas—oil, shipping, space technology, medical advancement—just to name a few.
Houston is also people—people in all walks of life, proud of their city's recreation, entertainment, scenery, parks, cultural at-

Shamrock Hilton Hotel—headquarters for the scientific sessions.

tractions, and history.
The 1974 Annual Session offers a unique four-day opportunity for professional and personal development, a combination that's hard to beat. So make plans now to attend. Discover Houston for yourself.
A comprehensive list of major sights, shopping areas, restaurants, and entertainment is included in the Annual Session Advance Program.

Things to do and see in Houston

Theaters/Cultural Entertainment

Alley Theater, 615 Texas. "Dracula" will be showing through May 12. This new adaptation of the novel by Bram Stoker is billed as "a classic myth with new thrills and chills . . . high comedy."

Dean Goss Dinner Theater, 2525 Murworth. Buffet dinner and comedy presentation.

Houston Music Theater, Southwest Freeway at Fondren Exit. Variety of entertaining attractions.

Jones Hall for the Performing Arts. Home of the Houston Symphony, Houston Grand Opera, Houston Ballet and a variety of year-round cultural events.

Windmill Dinner Theater, 390 Town and Country Blvd. Dinner and play.

Museums/Arts

Contemporary Arts Museum, 5216 Montrose.

Museum of Fine Arts, 1001 Bissonnet. Collection includes nation's finest in Remington westerns.

Museum of Natural Science, Burke Baker Planetarium, and Museum of Medical Science, 5800 Caroline (in Hermann Park).

Other attractions

Astrodome. Tours of this all-weather sports facility are available at 11 am, 1 pm, 3 pm on days when there is a night event scheduled; and 10 am when there is an afternoon event.

Astroworld. Open weekends only in May. Hours: Saturday, 10 am - 10 pm; Sunday, 10 am - 7 pm, Features over 60 acres of rides, live shows, and attractions.

Busch Bird Park, 755 Gellhorn (off Interstate 10 East). Open daily 9:30 - 4 pm. Free admission, free parking.

Houston Zoological Gardens, Hermann Park. Zoo open 9:30 - 6 pm daily. Free admission.

Lyndon B. Johnson Space Center. Located 22 miles southeast of downtown on NASA Road #1. No admission. Self-guided walking tours 9 am - 4 pm daily except federal holidays.

Port of Houston. The nation's third largest port sets new tonnage records each year. A ride on the *Sam Houston* allows visitors a view of this industrial area and the many facilities of the Port.

San Jacinto Battleground. Located on the Houston Ship Channel, this state park includes the San Jacinto Monument, San Jacinto Museum of History, and the Battleship Texas.

Texas Medical Center. This vast multi-million dollar complex occupies 200 acres of land adjacent to Hermann Park. It is internationally recognized as one of the finest facilities of health-education, health-research, and patient care. Tours may be arranged or visitors may prefer to drive through the Center.

Fiddling around for fun

In his early twenties Edward R. Hoffman sold his only guitar for enough money to purchase an engagement ring for his favorite girl. Today Dr. Hoffman has a collection of more than 75 string instruments from all over the world and continues to collect and restore unusual instruments with the help of his wife Alice.

"My first interest in musical instruments began during my days of growing up on a farm in Oklahoma, where our only contact with the outside world, other than the local town, was through the radio," Dr. Hoffman recalled. "In our case, the radio program was the Grand Old Opera on Saturday night. Of particular interest to me at the time were the Saturday afternoon movies because the Sons of the Pioneers, Tex Ritter, Roy Rogers, and Gene Autry played western music."

One of a family of nine, he worked in a filling station during the early part of World War II to help support his family. One day, a boy came through town with a guitar in the back seat of his car, looking for a way to buy some gasoline (which was rationed at that time). A trade was negotiated and Dr. Hoffman became the proud owner of his first guitar.

"A cousin taught me to play my first tune. Within a few years I had worked all the way to a new guitar bought by mail for $33." Gradually his playing improved. Finally, the dedicated musician was able to buy an electric guitar which he played Saturday nights in a small band called "The Rhythm Kings."

Then came the army, marriage, and further education. It was not until he had graduated from The University of Texas Southwestern Medical School and was finishing his OB-GYN residency that his interest in music was renewed.

Dr. Hoffman examines a violin with an unusually carved head.

Finding the guitar rather hard on his fingers, Dr. Hoffman visited a local music store in search of a better instrument. During one of these frequent visits he was introduced to a book on the five-string banjo which also described in detail how to make a banjo. Thus his interest in building and restoring instruments was sparked.

Unusual pieces have found their way into Dr. Hoffman's collection in many ways. He once noted an article in a travel magazine describing the mountain dulcimer just waiting for him in a small shop. This instrument gave him so much pleasure in the months following the trip that he began looking for similar souvenirs whenever he traveled.

The Hoffmans are confessed Flea Market fans, and these varietal bazaars often have been the source of instrument finds, the like of which they had never imagined. Because of his hobby Dr. Hoffman said he has become quite adept in Flea Market "dickering" sessions.

Editor's Note: This article is the third in *Texas Medicine's* collection of hobby features for 1974. Additional information on Texas physicians' hobbies will be welcomed by the editors for consideration.

Pictured is a Fele from Norway, an old eight-string violin-like instrument with a dragonhead for a peg box.

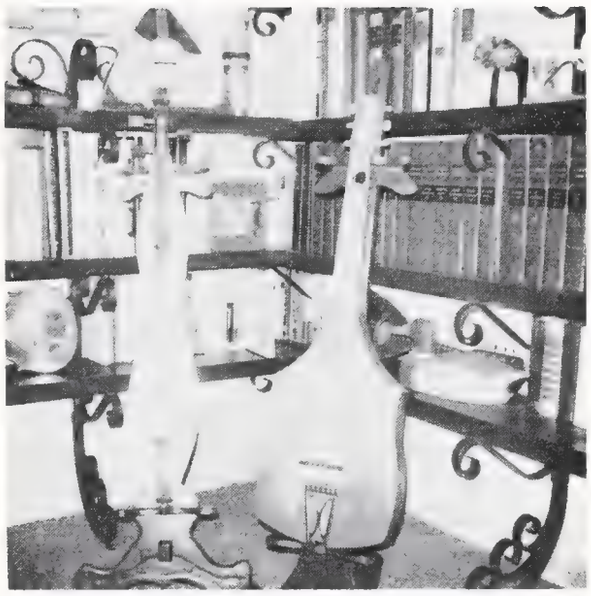
In his present collection are banjo-ukuleles, a balalaika from Russia, a fretted fiddle and a fretted viola from Germany, several five-string banjos, a banjo-mandolin, an armadillo shell guitar from Mexico, an Apache violin from Yellowstone Park, and numerous other conventional instruments such as guitars and violins.

"One of the most interesting instruments I own is a Fele from Norway. The old eight-string instrument is violin-like with a dragonhead for a peg box," the physician described. "The instrument is in perfect condition and I consider it a valuable find. Two of the violins that I have in the collection have an intricately carved area on the peg box in place of the usual scroll work."

Dr. Hoffman also owns one of the very first guitars that the Bruno Guitar Company made when they set up shop in the United States in the early 1900's. He explained that most of the instruments are not extremely valuable, but are of interest because of their fine wood and workmanship.

Unfortunately, a fire in his brother's home destroyed an instrument of historical sig-

Dr. Hoffman strums a tune on a five-string banjo that he made.



Many of the pieces in his collection are displayed in the Hoffman home including a mountain dulcimer (left) and a mountain guitar (right).

nificance, a mandolin that was one of the instruments played for the celebration of the railroad's coming to Albuquerque in the 1800's.

Dr. Hoffman has many stories of interesting happenings in pursuit of his hobby. "I recently finished making a five-string violin. Knowing a man in Oklahoma who plays such an instrument, I journeyed to see him during one of his Saturday night sessions when he plays for dances," he related. "He played the violin and although I was not proficient enough to play in the band, he asked me to sing some songs, which I did. It was probably a good thing that I was a long way from home, but I enjoyed the experience very much." Back home in Garland, Dr. Hoffman is part of a group that plays together about once a month.

How about some tips for a beginning collector? The physician-musician said there are several things which should be taken into consideration in selecting instruments for purchase. These include the potential of the instrument when it has been restored, the history of the instrument, and whether or not there is some unique quality, such as a carved figure or an unusual pearl or abalone inlay.

Once also involved in furniture making, Dr. Hoffman has focused his recent attentions on his string instruments. He has made three guitars, three banjos, and one violin (for which he had to make special tools to accomplish the task). He has just finished restoring two old banjos and is planning to restore a cello and an old violin which has a picture of a cathedral inlaid with abalone shell on the back.

Collecting is also a favorite pastime of his wife and daughter whose interests range from antiques to dolls. Needless to say, display and storage space in the Hoffman home is at a premium.

Discussion of his interest reveals insights about the hobbyist himself: "I find that restoring old instruments gives me a sense of accomplishment, creates something useful, and rescues something from extinction. Learning to play these instruments gives expression to the hobby of collecting."

He thoughtfully added, "As I polish the wood, I often wonder if the instrument could talk, what fantastic stories it could tell."

LEGAL PROTECTION: FACTS YOU SHOULD KNOW

Sam V. Stone, Jr.
TMA Office of General Counsel

INFORMED CONSENT

Texas courts, as others, have held that physicians have a duty to make a reasonable disclosure to a patient of risks incident to medical treatment and diagnosis. This duty is based upon the patient's right to information adequate for him to exercise an informed consent to or refusal of the procedure. The courts have refused to accept the "doctor knows best" philosophy and extended the concept of each person's right to decide whether or not to accept proposed treatment.

WHEN IS CONSENT NECESSARY?

Consent is *implied* in the case of a true medical emergency. Courts recognize the necessity that physicians be automatically authorized to proceed with needed treatment in instances where quick action is required to save the patient's life or protect his health from irreparable harm.

In all other cases where elective treatment is proposed, the informed consent of the patient (or the parent or guardian of a minor) is required.

WHAT IS INFORMED CONSENT?

Informed consent is the granting of authority to a physician by a patient or his legal representative after the grantor has received information constituting a reasonable disclosure of the risks incident to the proposed medical treatment or diagnosis. The test of "reasonable disclosure" is based on what a reasonable medical practitioner in the same or similar community would have disclosed under like or similar circumstances.

MUST ALL REMOTE POSSIBILITIES OR COMPLICATIONS BE DISCUSSED?

The courts have held that the physician must disclose only that which a "reasonable medical practitioner" would have disclosed under like or similar circumstances, recognizing that full disclosure may have a detrimental effect on some patients and may even be poor medical practice. The physician should also disclose information relating to the experimental nature of treatment, if applicable, the substantial risks involved, and freely and candidly answer the patient's questions. The guaranteeing of success or statements giving rise to false hope should be avoided.

WHO MAY SECURE THE WRITTEN INFORMED CONSENT?

Since it is the duty of the physician to secure informed consent, he is the one who should discuss the procedure with the patient, answer the questions, and disclose the substantial risks. A nurse or other assistant is not qualified to give the type of information necessary as a prerequisite to the granting of an informed consent.

SHOULD THE CONSENT BE IN WRITING?

Though oral consent is legally adequate for patient authorization, oral statements are often difficult to prove later, particularly if the question of consent is the subject of litigation. The granting of informed consent should be in written form and witnessed by at least one other person, preferably an employee of the physician.

WHAT TYPE OF TREATMENT REQUIRES INFORMED CONSENT?

Any elective surgery or medical treatment should be consented to by the patient or his legal representative. Almost every type of medical procedure has in one state or another been the subject of malpractice litigation based upon informed consent.

IS MORE THAN ONE INFORMED CONSENT NECESSARY?

Yes. In surgery cases the surgeon in charge should secure the informed consent of his patient as should the anesthesiologist discuss the proposed administration of anesthesia with the patient and disclose substantial or unusual risks.

WHERE SHOULD THE CONSENT BE SECURED?

Ideally, the physician should secure the informed consent in his office prior to any hospitalization. The consent secured by the hospital admissions clerk usually only protects the hospital. It is not the hospital's responsibility to secure the informed consent for physicians and the admissions clerk is probably not qualified to discuss the elements included in informed consent.

MEDICINE AND THE LAW

DRUG PRODUCT WARNINGS

Court holds that drug manufacturer must properly warn physician of side effects of drug products and that, in reference to prescription drugs, it would be an unreasonable burden for manufacturer to warn patient. Once properly warned, the physician has a duty to convey this warning on to the patient compatible with such reasonable disclosure as the law imports (informed consent).

FACTS: This case was a products liability action against certain manufacturers of drugs used in making the anesthetic administered to plaintiff and which allegedly caused injuries. Originally the plaintiff had sued the hospital, the doctors, and the anesthetist in a former suit in which a summary judgment was entered for all defendants. *Gravis v. Physicians & Surgeons Hospital of Alice,* 415 S.W. 2d 674 (Tex. Civ. App. 1967) and *Gravis v. Physicians & Surgeons Hospital of Alice,* 427 S.W. 2d 310 (Tex. Sup. 1968). That case was reversed and remanded for trial. Thereafter the plaintiff settled the suit with the doctors, the anesthetist, and the hospital. Subsequently, the plaintiff instituted suit against the drug firms whose products were used in the operation. The trial court again entered summary judgment for all defendants and the case was ultimately reversed and remanded for trial. *Gravis v. Abbott Laboratories, Inc.,* 462 S.W. 2d 410 (Tex. Civ. App. 1970) and *Abbott Laboratories, Inc. v. Gravis,* 470 S.W. 2d 639 (Tex. Sup. 1971).

An exploratory operation was performed on plaintiff in which a spinal anesthetic was administered. An intestinal obstruction was found and corrected. Later the plaintiff felt abnormal and couldn't move her legs. She was suffering from a number of physical disabilities including bladder trouble requiring a catheter continuously, phlebitis of the left leg, high blood pressure and other problems of the lower extremities.

The spinal anesthetic was composed of novocaine, dextrose, and adrenalin following a formula prepared by a physician. The evidence showed that the adrenalin (synthetic epenephrine) is one of the most commonly known drugs in the medical profession. The court further found that all of the drugs were compatible and such drugs had been used together as an anesthetic for many years. The anesthetist testified as to the procedures for the administration of the spinal anesthetic; that she examined the drugs for defects; and that she had administered over 2500 spinals without any adverse effect. She further testified that she had used ampules from the same box in two other operations on that day and that they were used without any reaction from other patients.

A diagnostician and specialist in internal medicine testified at length that he had treated the plaintiff following her initial hospitalization and had done an initial diagnosis and complete physical prior to the trial. His initial diagnosis was phlebothrombosis in the leg and peripheral neuropathy caused by the spinal anesthetic. He testified 1) there is a hazard in the administration of any kind of anesthetic that could in some cases cause death; 2) that undesirable results do occur sufficiently enough that manufacturers of anesthetics such as novocaine provide warnings in their literature; 3)as to the disclosure in the package insert with respect to novocaine; 4) that in his opinion there was no wrongdoing on anybody's part or defect in the administration of the medication; and 5) that this type of case, although happening only once in 200,000 times, is known to happen after spinal anesthetic. *Gravis v. Parke-Davis & Co.,* 502 S.W. 2d 863 (Tex. Civ. App. 1973).

HOLDINGS: The trial court's granting of a motion to withdraw the case from the jury was upheld in view of the fact that the evidence failed to establish that the drugs were defective. The court also said that the warning by the manufacturers directed to the attending physician were sufficient.

REASONING: The court stated that the plaintiff had the burden to prove the es-

sential elements of the cause of action including 1) the defectiveness of the product in question; 2) that the defect existed at the time the products left the hands of the defendant; 3) that because of the defect the product was unreasonably dangerous to the user; 4) that the user was injured or suffered damages; and 5) that the defect (if proved) was the proximate cause of the injuries suffered.

Simply stated, the product must be defective as marketed and proof that a drug in the anesthetic was defective is the prime requirement for recovery in this case. The court said there was no evidence that the drugs were impure or defective. The drugs were clear when visually inspected; 99 out of 100 that were in the original carton did not cause the injury; all sterilization processes were observed; there was no evidence that the drugs were administered improperly; that testimony was offered that the same results could occur from a hypersensitive reaction (abreaction) where there was no defect in the drugs administered, and the fact that the plaintiff was injured does not create liability.

The plaintiff complained that she should have been entitled to a jury issue based on the failure of the drug company to warn of a possible injury even if the anesthetic was not defective. The court said that if a product is unreasonably or inherently dangerous a warning is required. Restatement of Torts (2d. Ed.) Sec. 402a, Sec. 388 (1965). When the defect is due to inadequate labeling, the defect and the products are separable. The Supreme Court of Texas has previously ruled that when a product is defective due to inadequate labeling the aspect of the defendant's conduct that made the sale of the product unreasonably dangerous (i.e., the label) must be found to have contributed to the plaintiff's injury. According to the court, this means it is incumbent upon the plaintiff to secure a jury finding that the faulty label was the cause of the injury. There was no such proof in this case.

The court said the warnings regarding the drugs in question were directed to the attending physician and that it was unreasonable to suppose that a drug manufacturer must go beyond the physician and give actual warnings to the patient. The court further stated, "These drugs were manufactured for administration only by a physician or other authorized person . . . If the doctor has been properly warned of the possible side effects, then we believe it is his duty to convey this warning on to the patient compatible with such a reasonable disclosure as the law imports."

The court also cited a case relating to informed consent in which it was held that the doctor fell within the guidelines set out by the Texas Supreme Court in *Wilson v. Scott,* 412 S.W. 2d 299, 301 (Tex. 1967). This ruling stated that every adult person has a right to determine what is done to his own body, and thus a patient's consent is a necessary prerequisite to any treatment or operation. It also said that the consenting patient must have sufficient information regarding the consequences to form an intelligent decision.

The court said the question is moot in this case as to whether the specific doctors or others breached their duty to warn Mrs. Gravis.

The court said the entire system of drug distribution in America is set up so as to place the responsibility of distribution and use upon professional people. The laws and regulations prevent prescription type drugs from being purchased by individuals without the advice, guidance, and consent of licensed physicians and pharmacists. These professionals are in the best position to evaluate the warnings put out by the drug industry. The holdings in no way relieve the drug companies of their duty to warn or to provide a product free of defects.

CONCLUSIONS: If the manufacturer properly warns the physician of side effects of drugs, if the drugs were not defective, the physician properly warns the patient of possible side effects of same, and no malpractice is involved, the fact that there was injury does not create liability for either manufacturer or physician.

TMA Office of General Counsel
Ace Pickens

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COLACE®
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COLACE works to prevent pain and straining at stool with minimum chance of griping or cramps, particularly in patients with delicate anorectal disorders. COLACE is safe and non-habit forming in short- or long-term therapy. COLACE—the simple water way to ease constipation from infancy to old age. Capsules, syrup or liquid.

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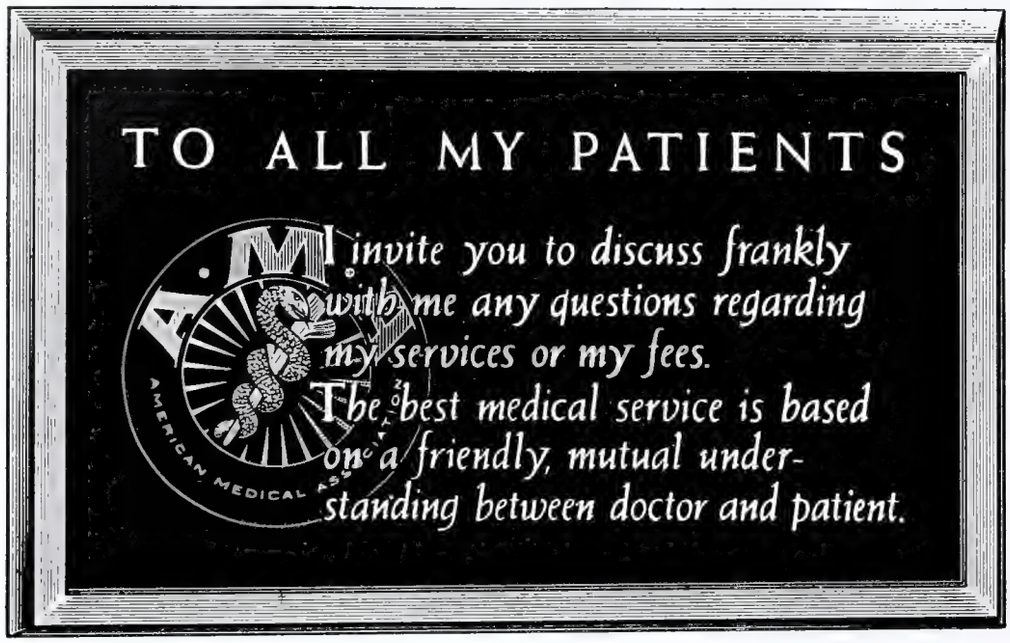

Do Your Patients Understand Your Fees?

Patients hesitate to ask about fees. But they **want** to know. They naturally worry about what their medical costs will be. And if they don't feel free to talk about it, serious problems—misunderstanding, resentment and even deep hostility—can arise, threatening the all-important rapport between you and your patients.

Open discussion **before** treatment prevents such embarrassing problems. It paves the way for mutual understanding and good will.

An AMA Fee Plaque, prominently displayed in your waiting room, serves as an open invitation for your patients to discuss medical costs and financial problems with you. It shows that you care. Just seeing the message can give many financially worried patients peace of mind.

The AMA Fee Plaque works hard to prevent doctor-patient misunderstandings. And it works well.

Suitable for wall or desk display, the plaque measures 6″ x 10½″. The lettering is white on a dark brown background and the frame is durable beige plastic.

How do you obtain one?

Just mail the coupon below and your check, or money order, for $2.40 (postage paid). Your Fee Plaque will be sent to you by return mail.

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Questions/Answers

Editor's note: The following are additional questions taken from the new brochure, "Careers in Dentistry and Medicine—64 questions and answers," compiled by The University of Texas System. First carried in the February issue, questions from this brochure will appear throughout the year in *Texas Medicine*. Copies are available from the UT Medical and Dental Application Center, 800 Brazos, Suite 801, Austin 78701.

Q Does it help for the applicant to visit the school and/or to seek an interview?
A Visiting a school can be helpful to the applicant as well as to the Admissions Committee. The applicant can learn a great deal about a school by visiting it, meeting some of its students and faculty, and having an opportunity to ask questions of the persons who will be reviewing his application. Formal interviews are not required by the dental schools in the System, but they welcome an opportunity to talk with applicants. The medical schools generally extend invitations for interviews to those applicants they feel will have the best chances for admission.

Q Does it help to have governmental and/or community leaders write special letters to the dean and the admissions committee?
A The most meaningful letters of appraisal are from the pre-professional advisor or those who have known the applicant as a student or who have employed him.

Q Is it easier to obtain acceptance in some schools than others?
A Yes. State supported schools generally give preference to legal residents of that state. Because each school uses slightly different criteria for admission, it is conceivable that an applicant might be more acceptable to one school than another. Selection is competitive in all schools, but some receive larger numbers of applications and some have a high percentage of extremely well-qualified applicants. Also, competition may vary with each school from year to year.

Q What is the timetable for application from submission through acceptance?
A Applications are available June 1 and should be submitted between July 1 and Nov 1 of the year preceding expected matriculation. Acceptances to dental schools are offered after Dec 1. The following dates are those adhered to by the medical schools in offering positions: Jan 15; Feb 15; March 15; and as openings occur thereafter.

Q Which elective courses should one take?
A Usually it is advisable to have more than the minimum number of science courses required for admission. It is also wise to take non-science courses (history, psychology, literature, etc.) that will round out your education and prepare you for a professional life in the community. Dental applicants are often advised to take a few courses in art, sculpturing, mechanical drawing, or painting.

Q Is it advisable to take courses required by health professional schools on a pass/fail?
A No. The professional schools are interested in an evaluation of competence, and "D" grades are not acceptable. If a required course is taken in an institution where only a pass-fail grading system is used, it would be advisable to have the instructor write letters giving a grade appraisal of your competence in the course.

Q Will a student who was on the alternate list one year be given any special consideration if he applies the next year?
A No. He must again compete with all applicants.

Medical Newsmakers

Houston specialist in cardiovascular diseases, DR. ROBERT J HALL was elected assistant secretary of the American College of Cardiology.

DR. ROBERT D MORETON of Houston and DR. N L BARKER of Paris were reappointed to the State Board of Health. Their terms will expire June 12, 1979. Dr. Moreton is vice president of professional and public services for The University of Texas Cancer Center and vice president for health science at M. D. Anderson Hospital and Tumor Institute. Dr. Barker is a family physician in Paris and a member of the board of trustees of the Texas Medical Association. Both physicians are Texas Medical Association delegates to the American Medical Association.

J TED NORRIS, PHD, was elected president of the Student American Medical Association at the 24th Student American Medical Association Convention in Dallas. Dr. Norris is a third year medical student at The University of Texas Medical Branch at Galveston.

The University of Texas Board of Regents has approved the naming of DR. GEORGE R HERRMANN as the Ashbel Smith Professor Emeritus of Medicine of The University of Texas Medical Branch at Galveston. Dr. Herrmann was a teacher and cardiovascular researcher at UTMB for 44 years before retiring last November.

MRS. FRANCIS BOLTON, formerly Service Relations Coordinator in Austin for Blue Cross-Blue Shield of Texas, has been promoted to the position of Public Relations Specialist—State Departments. Mrs. Bolton joined Blue Cross-Blue Shield of Texas in 1948.

DR. FRANK GRIFFIN of Liberty was honored as Outstanding Citizen of the Year by the Liberty Chamber of Commerce. Dr. Griffin has practiced medicine in Liberty since 1938.

New officers of the Texas Association of Obstetricians and Gynecologists are DR. WILLIAM BADEN, president; DR. WILLIAM McGANITY, president-elect; and DR. CHARLES E FOUGEROUSSE, vice-president. DR. DENNIS M VOULGARIS was re-elected secretary-treasurer.

"The implanting of electrical devices is getting out of hand."

Medicine in literature

Freedom from Backaches, Lawrence W Friedman, and Lawrence Galton, 241 pp, illus, New York, Simon and Schuster, 1973, $7.95.

"Is it possible for most backache victims to relieve an acute attack quickly, determine for themselves the basic cause, and correct it, reducing and even eliminating recurrences?" The authors think so and know so. These two men are unique in their comprehension and knowledge among medical practitioners and patients with low back pain.

The book ranges from acupuncture to Masters & Johnson's sexual studies. Written by a physiatrist and his layman co-author, it is not unexpected to find that "a physiatrist is often the specialist of choice (in treating back pain) because of his prime interest in functioning of bones, nerves, and muscles." The authors do grant that "An orthopaedic surgeon, whose prime interest lies in bones and their integrity, is often of help."

The section on exercises, well illustrated, is a useful portion of this book. I would recommend this book for a layman who wishes a superficial understanding of topics varying from whether one should apply heat or cold to the back for backache to the value of the woman-on-top position in sexual intercourse as therapeusis for lumbago.

Morton H Leonard, MD
El Paso

IN THE TMA LIBRARY

Diet Manuals

Department of Nutrition University of Iowa: *Recent Advances in Therapeutic Diets,* ed 2, Iowa State University Press, 1973.

Beck Mary E: *Nutrition & Dietetics for Nurses,* ed 2, Baltimore, Williams & Wilkins, 1971.

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RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

F. K. Dornak
Houston, 1905-1973

L. C. Feener
El Paso, 1900-1974

E. L. Graham
Cisco, 1889-1974

K. C. Haltalin
Dallas, 1933-1973

K. B. Kincy
Kerrville, 1915-1974

P. Rosenheim
Corpus Christi, 1901-1973

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Recent deaths

Dr. K C Haltalin

Dr. Kenneth Clifford Haltalin, associate professor of pediatrics at The University of Texas Southwestern Medical School at Dallas, died Dec 21, 1973. He was 40 years old.

Dr. Haltalin was a graduate of the University of British Columbia School of Medicine, Vancouver, and he completed an internship at Vancouver General Hospital, Vancouver. Following a residency in pediatrics at Children's Medical Center, Dallas, and postgraduate work in infectious diseases at The University of Texas Southwestern Medical School at Dallas, he joined the full-time faculty of the school.

Professional memberships included the Texas Medical Association, Society for Pediatric Research, American Society for Microbiology, Texas Pediatric Society, Infectious Disease Society of America, and Dallas Pediatric Society. He was also certified by the American Board of Pediatrics.

He is survived by his mother, Mrs. Florence Haltalin, Vancouver, and sister, Mrs. Carol Weir, Illinois.

Dr. L C Feener

Dr. Lester Conrad Feener, El Paso internist, died Feb 20, 1974, at the age of 73.

A native of South Hamilton, Mass, Dr. Feener earned an MD degree from Tufts University School of Medicine at Boston. He completed an internship at Carney Hospital, Boston, prior to entering private practice in Gloucester, Mass. He also completed postgraduate work at Tulane University School of Medicine, New Orleans; Columbia University, New York; and Harvard University, Boston. In 1936, he moved to Harlingen, Tex, where he practiced for four years before serving with the US Army in World War II. After discharge from the service, Dr. Feener established his medical practice in El Paso where he remained until his death.

Dr. Feener held memberships in American College of Physicians, American Society of Internal Medicine, El Paso County Medical Society, Texas Medical Association, and American Medical Association. He was certified by the American Board of Internal Medicine in 1944.

Survivors include his wife, Helen Corkum Feener, El Paso; sister, Mrs. Morton Woodason, Sharon, Mass; and two nephews.

Dr. E L Graham

Family physician and surgeon in Cisco for over 50 years, Dr. Emmett Lemuel Graham died Jan 11, 1974, in Cisco. He was 84 years old.

Dr. Graham received an MD degree from The University of Texas Medical Branch at Galveston in 1915. He completed internships and residencies while serving with the armed forces in Europe during World War I. He had also completed a number of postgraduate courses both in the United States and Europe during his more than 50 years of medical practice. In 1970, the new health and medical center in Cisco was dedicated to him for his long-time service to the community. He retired in 1971.

Dr. Graham was a fellow of the American College of Surgeons and honorary member of Texas Medical Association, as well as a member of Eastland-Callahan-Stephens-Shackelford-Throckmorton County Medical Society and American Medical Association.

The physician is survived by his wife, Nova Shelton Graham, Cisco; daughter, Mrs. Gloria Stroud, Dallas; son Emmett L Graham, Jr, Abilene; two brothers; two sisters and five grandchildren.

Dr. Haltalin

Dr. Feener

Dr. Graham

Dr. Kincy

Dr. Dornak

Dr. Rosenheim

Dr K B Kincy

Dr. Kenneth B Kincy, Kerrville psychiatrist, died Feb 7, 1974, while fishing near Medina. A heart attack caused the death of the 59-year-old physician.

Born in Arkansas in 1915, Dr. Kincy received a BA degree from the University of Oklahoma, Norman, and an MD degree from the University of Oklahoma School of Medicine, Oklahoma City. He completed an internship at Hollywood Presbyterian Hospital, Los Angeles, prior to entering the US Army Medical Corp. After practicing in California for a number of years, Dr. Kincy returned to Oklahoma where he took a residency in psychiatry at Central State Griffin Memorial Hospital, Norman. He moved to Kerrville in 1969, where he was associated with the Kerrville State Hospital and Hill Country Mental Health and Mental Retardation Center at Callcott House.

Dr. Kincy was a member of McClain County Medical Society, Oklahoma; Oklahoma State Medical Association; Kerr-Kendall-Gillespie-Bandera County Medical Society; Texas Medical Association; American Psychiatric Association; and American Medical Association.

He is survived by his wife, Mrs. Ruby Chambliss Kincy, Kerrville; two sons, Kenneth Kincy, Fayetteville, Ark, and Timothy Kincy, Tustin, Calif; two daughters, Misses Cathy and Lori Kincy, both of Springfield, Ill; three brothers; and five sisters.

Dr. F K Dornak

Houston general surgeon, Dr. Franklin Karl Dornak died Dec 1, 1973. Acute myocardial infarction caused the death of the 69-year-old physician.

Dr. Dornak was a graduate of Tulane University School of Medicine, New Orleans, and completed an internship at Methodist Hospital, Houston. Following a residency at St Joseph Hospital, Houston, he began practicing medicine in Houston. During World War II, he served as a colonel in the US Army, and after discharge, he returned to Houston where he continued his practice of medicine until his death.

Dr. Dornak was a member of Harris County Medical Society, Texas Medical Association, and American Medical Association. He was also a fellow of American College of Surgeons.

He is survived by his wife, Wilma Dennard Dornak, Houston; two sons, Franklin K Dornak, III, Seguin, and Joe B Dornak, Houston; and one daughter, Mary Dornak Wooten, Dallas.

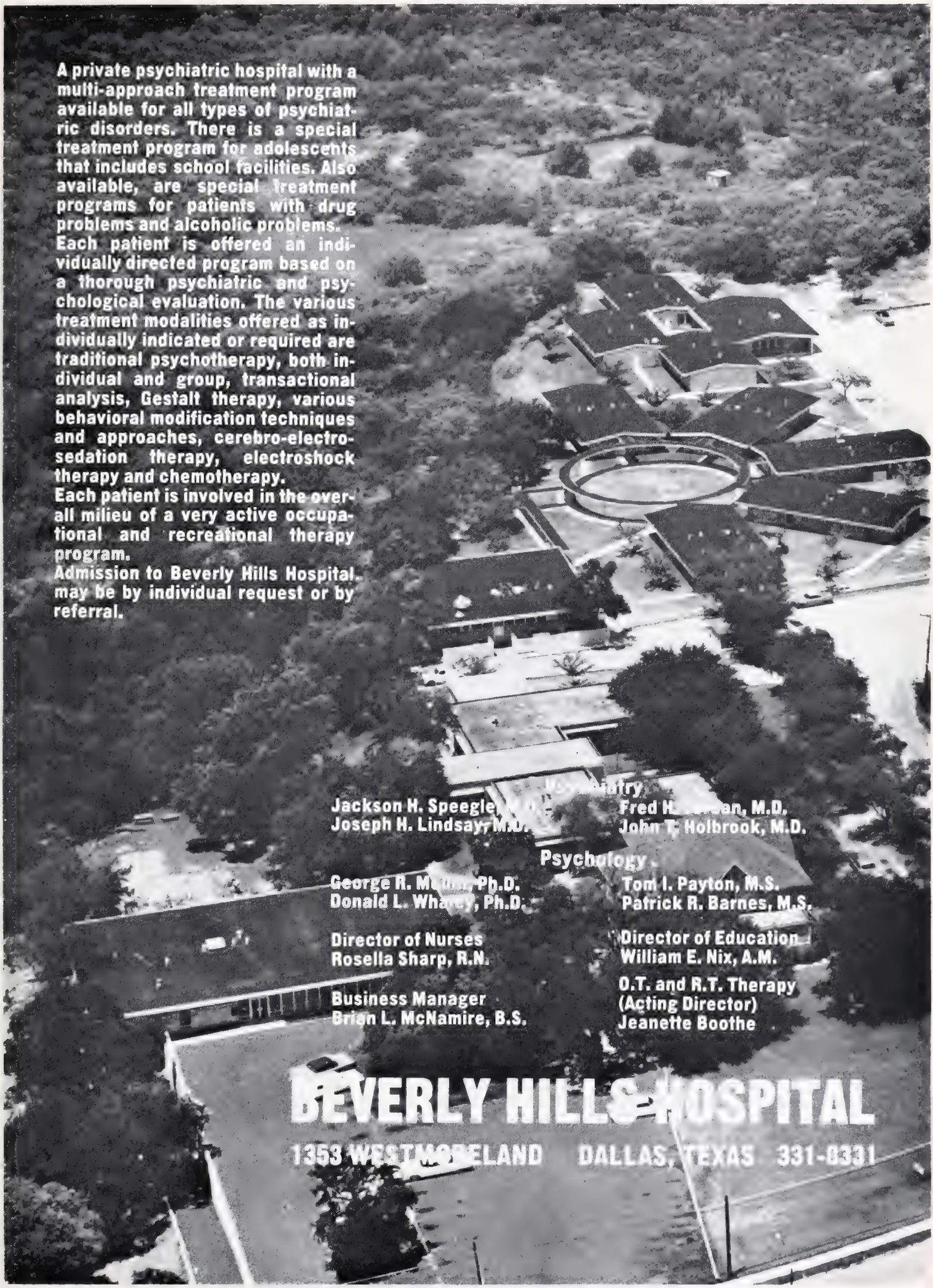
Dr. P Rosenheim

Corpus Christi family physician, Dr. Philipp Rosenheim died Dec 14, 1973. Cancer of the colon caused the death of the 72-year-old physician.

Born in Magdeburg, Germany, Dr. Rosenheim earned an MD degree from Friedrich-Wilhelms-Universitat Medizinische Fakultat, Berlin. He completed internships and residencies in Berlin and Magdeburg, Germany. Following a short medical practice in Magdeburg, Dr. Rosenheim came to the United States where he completed another residency at Leo N Levi Memorial Hospital, Hot Springs, Ark. He began his medical practice in Corpus Christi in 1939, and remained there until his death.

Dr. Rosenheim was a member of Nueces County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Vera H Rosenheim, Corpus Christi; daughter, Mrs. Mari R Wormser, Pine Bluff, Ark; sister, Mrs. Henny Mosbach, London, England; and two grandsons.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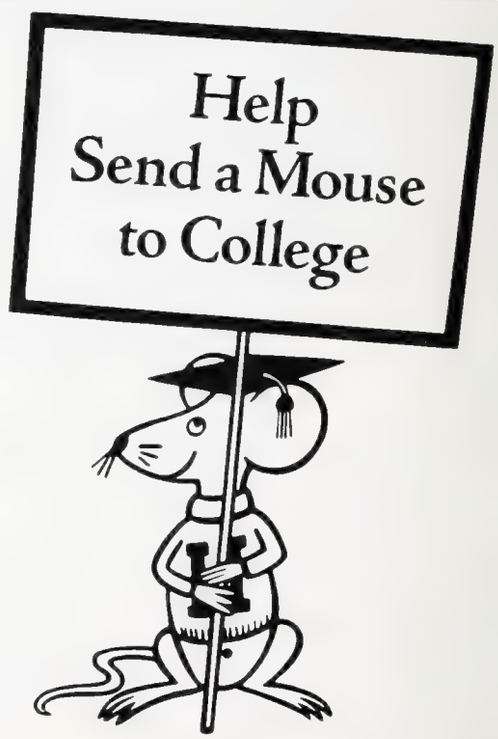

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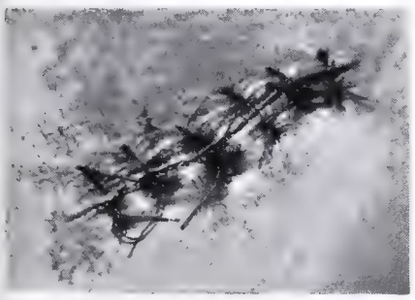

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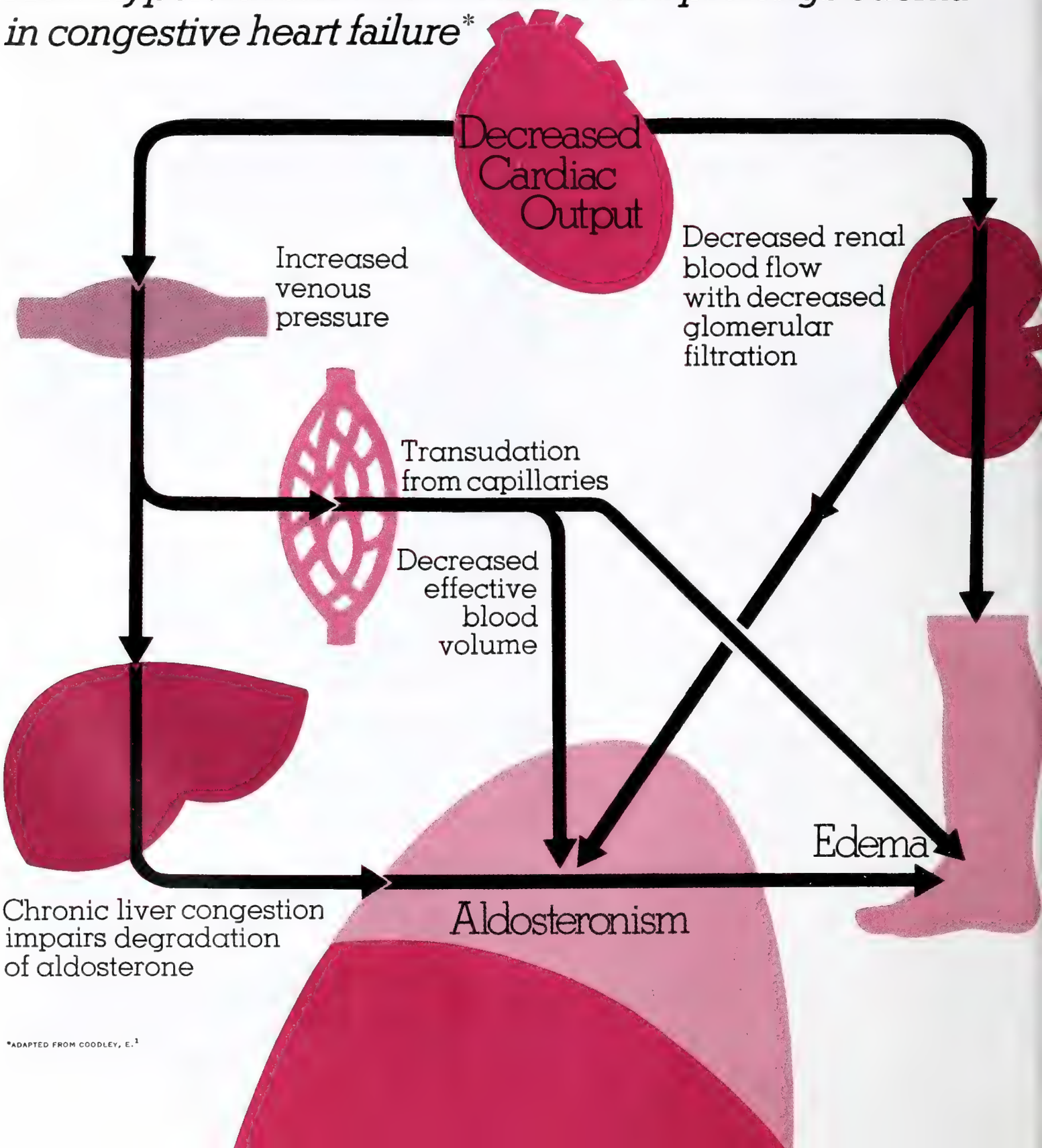
In congestive heart failure...
secondary aldosteronism

*How hyperaldosteronism leads to and prolongs edema in congestive heart failure**



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Three ways to use Aldactone in congestive heart failure

1. As the only diuretic

- Often sufficient alone.
- Produces gradual, sustained diuresis by blocking aldosterone action in the distal renal tubule.
- Avoids potassium loss.

2. As the basic daily diuretic with an "add-on" alternate-day-diuretic ("A.D.D." schedule)

- Can be administered daily as basic therapy with the additional agent (furosemide or ethacrynic acid) given every second or third day.
- Aldactone plus "A.D.D." schedule minimizes potassium deficiency and potentiates effect of "add-on" diuretic.[2]
- Avoids acute volume depletion and aldosterone rebound.[2]

3. As a daily diuretic in combination with a daily dose of a thiazide

- Permits daily additive diuretic effect while maintaining potassium balance.

Indications—Essential hypertension; edema or ascites of congestive heart failure, cirrhosis of the liver and the nephrotic syndrome; idiopathic edema. Some patients with malignant effusions may benefit from Aldactone (spironolactone), particularly when given with a thiazide diuretic.

Contraindications—Acute renal insufficiency, rapidly progressing impairment of renal function, anuria and hyperkalemia.

Warnings—Potassium supplementation may cause hyperkalemia and is not indicated unless a glucocorticoid is also given. Discontinue potassium supplementation if hyperkalemia develops. **Usage of any drug in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the mother and fetus.**

Precautions—Patients should be checked carefully since electrolyte imbalance may occur. Although usually insignificant, hyperkalemia may be serious when renal impairment exists; deaths have occurred. Hyponatremia, manifested by dryness of the mouth, thirst, lethargy and drowsiness, together with a low serum sodium may be caused or aggravated, especially when Aldactone is combined with other diuretics. Elevation of BUN may occur, especially when pretreatment hyperazotemia exists. Mild acidosis may occur. Reduce the dosage of other antihypertensive drugs, particularly the ganglionic blocking agents, by at least 50 percent when adding Aldactone since it may potentiate their action.

Adverse Reactions—Drowsiness, lethargy, headache, diarrhea and other gastrointestinal symptoms, maculopapular or erythematous cutaneous eruptions, urticaria, mental confusion, drug fever, ataxia, gynecomastia, inability to achieve or maintain erection, mild androgenic effects, including hirsutism, irregular menses and deepening voice. Adverse reactions are infrequent and usually reversible.

Dosage and Administration—For **essential hypertension** in **adults** the daily dosage is 50 to 100 mg. in divided doses. Aldactone may be combined with a thiazide diuretic if necessary. Continue treatment for two weeks or longer since an adequate response may not occur sooner. Adjust subsequent dosage according to response of patient.

For edema, ascites or **effusions** in **adults** initial daily dosage is 100 mg. in divided doses. Continue medication for at least five days to determine diuretic response; add a thiazide or organic mercurial if adequate diuretic response has not occurred. Aldactone dosage should not be changed when other therapy is added. A daily dosage of Aldactone considerably greater than 75 mg. may be given if necessary.

A glucocorticoid, such as 15 to 20 mg. of prednisone daily, may be desirable for patients with extremely resistant edema which does not respond adequately to Aldactone and a conventional diuretic. Observe the usual precautions applicable to glucocorticoid therapy; supplemental potassium will usually be necessary. Such patients frequently have an associated hyponatremia—restriction of fluid intake to 1 liter per day or administration of mannitol or urea may be necessary (these measures are contraindicated in patients with uremia or severely impaired renal function). Mannitol is contraindicated in patients with congestive heart failure, and urea is contraindicated with a history or signs of hepatic coma unless the patient is receiving antibiotics orally to "sterilize" the gastrointestinal tract.

Glucocorticoids should probably be given first to patients with nephrosis since Aldactone, although useful for diuresis, will not directly affect the basic pathologic process.

For **children** the daily dosage should provide 1.5 mg. of Aldactone per pound of body weight.

References: 1. Coodley, E.: Consultant 12:106-107, 109, 111, 113, 115 (July) 1972. 2. Thorn, G. W., and Lauler, D. P.: Am. J. Med. 53:673-684 (Nov.) 1972.

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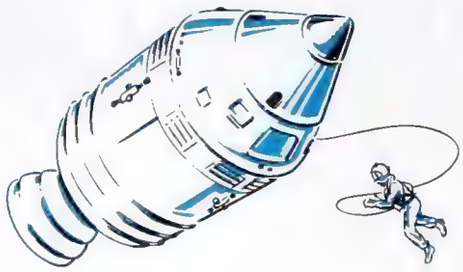

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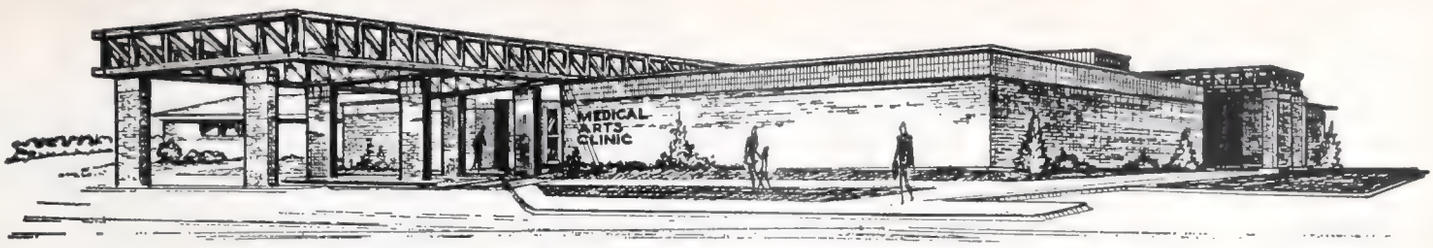

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Patient P.T.* seen on 6/12/67, seven weeks after discontinuation of 5% FU cream. Reaction has subsided. Residual scarring not seen except that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.

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Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics. The typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.

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Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

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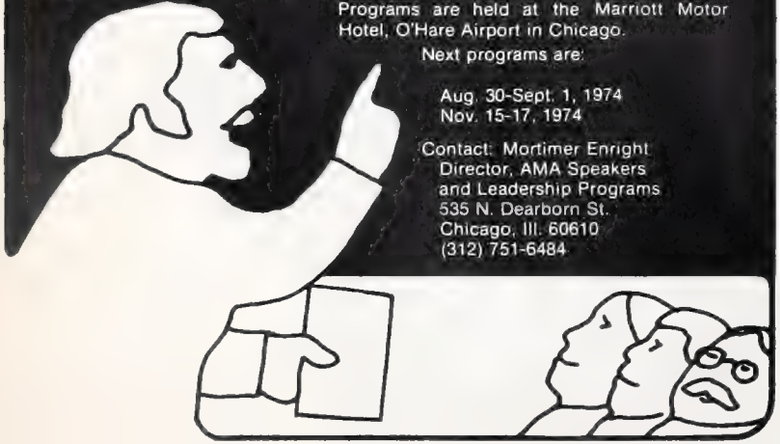

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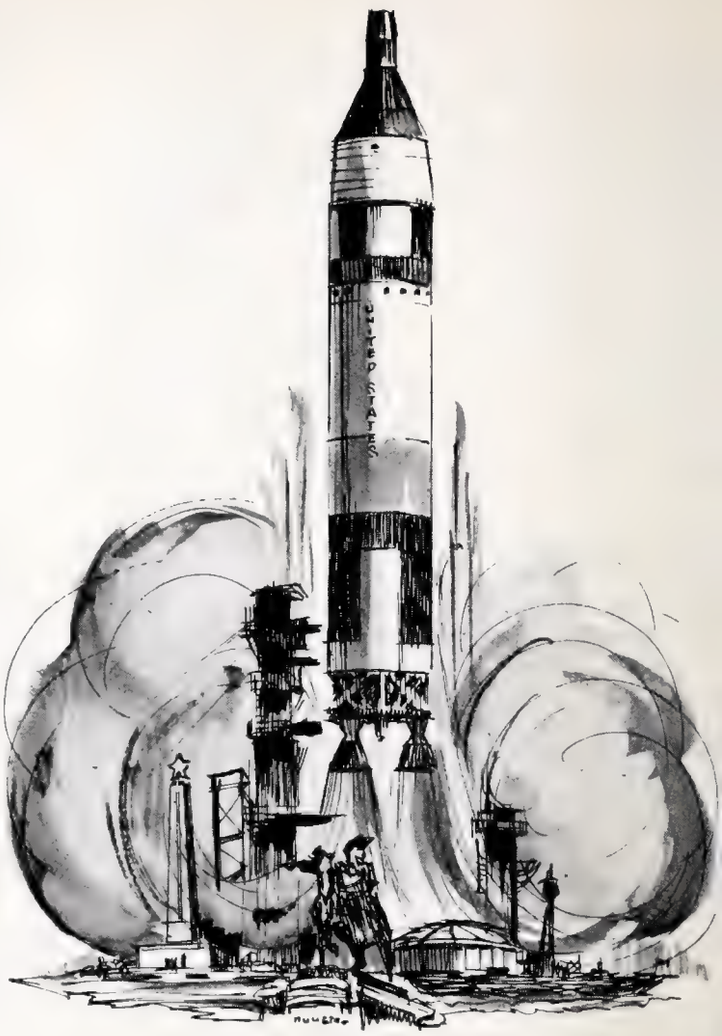

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ORTHOPEDIC SURGEON AND TWO GP's needed by 19 doctor group, 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 3330 South Lancaster Road, Dallas, Texas 75216.

INTERNIST AND GENERAL PRACTITIONER WANTED by a four man group in a 10,000 population county seat town in Central Texas. The location is one hour from Dallas and Fort Worth, 30 minutes from Waco, and 20 minutes from Lake Whitney Dam. The clinic is located in the same building with a 50-bed, fully accredited hospital. The doctors have no hospital financial responsibility. Will start the right man at $30,000 salary for first year and full partnership after one or two years. All office expenses paid. Visiting & relocation expenses paid. Please reply to Ad-301, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ATTENTION PILOT PHYSICIANS: Combine emergency room work with flying. Group maintains Bonanza for business and pleasure. Please reply to Ad-365, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER: Excellent location in the Lost Pines of Texas area. Growing community of 3,500 along the beautiful Colorado river has an excellent opportunity for a good family general practitioner. Excellent small hospital (25 beds) and nursing home (62 beds) complex. Guaranteed salary, clinic environment and other fringe benefits will make this difficult to turn down if interested in working in a progressive rural community. Write Ad-386, *Texas Medicine*, 1801 North Lamar Boulevard, Austin, Texas 78701.

FP OR IM TO JOIN THREE MAN GROUP. Investigate facilities, compatability, economics and environment personally with wife and family. Community Health Center, P.O. Box 672, Trinity, Texas. 713-594-3595 for Barnes, Colwell or Cook.

EMERGENCY DEPARTMENT PHYSICIAN IN TEXAS: Average earnings $45,000 with guarantee. Full department status. Maintain free practice of medicine. Work for patient on fee-for-service basis. Call 1-512-653-8221. Apply to Ad-417, *Texas Medicine*, 1801 North Lamar Blvd., Austin, 78701.

FAMILY PRACTICE PHYSICIAN NEEDED to join a three man group doing general practice. New community hospital and new clinic building under construction now, modern golf course, large lake, excellent hunting, excellent schools with no busing and no integration problems. 90 minutes from Dallas-Fort Worth. No investment necessary. Salary first year negotiable, with partnership after one or two years if desired. Contact K. J. Wharram, M. D. or A. D. Major, M.D., Nocona, Texas 76255. AC 817-825-3371.

FAMILY PRACTICE with two other physicians. 50 bed hospital adjacent to clinic. Two nursing homes located in town. Large patient drawing area, good fishing, hunting, 8 miles to Lake Whitney, excellent schools, churches, and progressive small town. Guaranteed salary until established, partnership available in future. Contact Morris R. Hill, M. D. or James G. Barton, M. D. at Barton & Hill Medical Association, P. O. Box 546, Whitney, Texas 76692; phone AC817-694-2221.

WANTED: GENERAL PRACTITIONER OR INTERNIST on staff of San Angelo Center. This is an institution for the moderately mentally retarded of the state. Salaries are quite competitive with other state and federal institutions. 40 hour work week, ample vacation time, and other fringe benefits. Excellent community to live, near San Angelo, Texas. Contact Medical Director, San Angelo Center, Carlsbad, Texas 76934.

FAMILY PHYSICIAN: This is an opportunity you should look into. Three family practice physicians need fourth man. No capital outlay, equal privileges, no buy-in, guarantee until established, set your own pace. Clinic, 40-bed hospital, 44-bed extended care, accredited by JCAH. Contact Ray W. Freeman, M.D., Chief of Staff, or Gordon Russell, Administrator, Hi-Plains Hospital-Clinic, 203 West 4th, Hale Center, Texas 79041. Call 806, 839-2471.

NEEDED—INTERNIST TO ASSOCIATE with three busy GP's in Central Texas university town. No internist in area. Should be nice place to live and work. Please reply to Ad-457, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

THREE PHYSICIANS NEEDED. FAMILY PRACTICE PHYSICIAN, INTERNIST AND SURGEON needed to join a full time, five man clinic association group with part time radiologist and clinical pathologist in Clifton, Texas. Located in the heart of Texas, 35 miles NW of Waco, 15 miles from Lake Whitney. Good fishing, excellent hunting, new, recently completed, modern golf course. Excellent schools, churches and growing progressive small town. Closely associated with new 65-bed hospital facility, which is fully accredited by the Joint Commission. Suggest salary at first with partnership in future. Financial terms open. Please contact V. D. Goodall, M.D., Clifton Medical and Surgical Clinic Association, Clifton, Texas 76634. Telephone 675-8621 or 675-3113.

PSYCHIATRIC RESIDENCY IN APPROVED 3-YEAR PROGRAM. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty and programs. Stipends with Texas license are $13,000, $14,000 and $15,000 per year. In addition, now offering residency in child psychiatry. For full information write to: Anthony P. Rousos, M.D., Director of Training and Research, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

FAMILY PHYSICIAN OR GENERAL INTERNIST for group practice in attractive Central Texas town. Must have boards or be board eligible, under 35. Complete group will consist of 3 older GPs and 4 board certified younger men. Write O. W. Lowrey, M.D., Lowrey Clinic, Gatesville, Texas 76528, or phone collect AC817-865-2266.

WANTED: PHYSICIAN TO JOIN GENERAL SURGEON AND GENERAL PRACTITIONER in small town. Privately owned clinic and hospital combination. Guaranteed salary. Prefer family practice specialist. For additional information, please contact M. A. Childress, M.D., P.O. Box 289, Goldthwaite, Texas 76844; Phone 915-648-2212.

TEXAS, EL PASO: WANTED: Full time emergency department physicians needed at 436 bed modern hospital in El Paso. Attractive income assured on salary and/or percentage contract. Write to Administrator, Providence Memorial Hospital, El Paso, Texas 79902.

FAMILY PRACTICE, with two other family practitioners. Two hospitals with 550 beds within fifteen minute, 4 lane drive. Progressive Central Texas community of 4,350 population. Community void of problems of large cities. 15 miles to Waco (pop. 102,000); 100 miles to Dallas, Fort Worth, and Austin. Good schools (no bussing), churches, country club with 18 hole golf course, three nearby lakes, recreational facilities. An excellent place to raise a family. New associate would be on salary first year; partnership in association later. Exchange calls and weekends with two other physicians. Contact R. Dean Elliott, Administrator, 414 Johnson Drive, McGregor, Texas 76657. AC817-840-3281.

PHYSICIANS NEEDED—Staff physicians, general practitioners and/or board certified specialists to increase staff of Travis State School. Fringe benefits include 40-hour work week, vacation and sick leave. Present and projected salary increases make positions attractive. Texas license required. Contact Superintendent or Medical Director, Travis State School, P. O. Box 430, Austin, Texas 78767. Phone AC512-926-2410. An equal opportunity employer.

PSYCHIATRIST WANTED: Board certified or eligible, bilingual (Spanish & English) psychiatrist interested in Day Care concept to join the Staff of the El Paso Psychiatric Clinic. Apply Director, El Paso Psychiatric Clinic, 2616 North Oregon, El Paso, Texas 79902.

GENERAL PRACTITIONER AND INTERNIST. Newly constructed multi-specialty 6-man clinic in West Texas city of 150,000. New 120 bed accredited hospital adjacent to clinic. Top salary with partnership opportunity in two years. Interested applicants send curriculum vitae to AD-483, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ALLERGIST—Board certified or eligible. Join growing solo practice North Central Texas. Salary, then full partnership association. 120,000 population, 300,000 drawing area. Excellent hospital facilities. Ideal family living. Send curriculum vitae with reply please. Hermann Gregory, M.D., 1310 Ninth Street, Wichita Falls, Texas 76301. 817-322-6926.

INTERNIST with subspecialty in either pulmonary disease or gastroenterology to associate with multi-specialty clinic, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

UROLOGIST to associate with multi-specialty clinic, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

RADIOLOGIST to associate with multi-specialty clinic, soon to be in new hospital with all new equipment; fringe benefits, good climate, good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

FAMILY PRACTITIONER to associate with multi-specialty clinic developing a special section on family practice, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

PATHOLOGIST to associate with multi-specialty clinic soon to be in new hospital with all new equipment; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

FAMILY PRACTITIONER ASSOCIATE SOUGHT by three family practitioners in expanding population and recreational area with new 22 bed community hospital 30 miles from Austin. Also near enough to San Antonio and Houston to enjoy cultural and post graduate opportunities. Very good earnings from beginning; no buy-in required. Please reply to Bastrop Clinic, 1109 Church Street, Bastrop, Texas 78602. Phone AC512-321-2541.

WANTED: A PHYSICIAN FOR GENERAL PRACTICE in Poteet, Texas. Area population over 8,000; 20 miles south of San Antonio, Texas. Newly equipped $125,000 medical clinic available at very low rates. Equipped with x-ray; offices for two medical doctors; waiting room equipped. Contact A. Hollub, Poteet, Texas; Phone 626-2861.

PHYSICIAN NEEDED in a small Hill Country city in Texas. Existing equipped clinic or new facility available. No physician within a forty mile radius. Excellent opportunity for a energetic physician willing to work in a small community. Call collect: Jack Buchanan 512-232-5224 or P.O. Box 699, Leakey, Texas 78873.

INTERNIST TO JOIN BUSY GROWING PRIVATE PRACTICE. Located in town of 18,000 on western edge of Dallas-Fort Worth Metroplex, working with two general practitioners who are in early 40s and well established. Superb, full diagnostic equipment and facilities. Enjoyable and satisfying environment. Future partnership anticipated; beginning arrangements, mutually acceptable basis, dependent upon personal and professional qualifications. Write Ad-499, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEED TWO FAMILY PRACTITIONERS for well established clinic in group practice. Clinic adjacent to fully accredited hospital. City of 30,000. No investment required. Contact Clyde E. Thomas, Jr., P.O. Box 2071, Big Spring, Texas 915-267-7411.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $8.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 20th of the month preceding publication. Send copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from big city problems. Call collect Dr. Preston McCall at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

DALLAS, HOUSTON, HILLSBORO, CONROE AND BAYTOWN. Excellent private practices in Ob-Gyn, internal medicine, orthopedics and general practice. Solo, group and associate. Attractive income guarantee. Practice expense negligible first year. No cost to interested physicians to investigate. Write with CV to Sanford Smith, Director of Physician Planning, Hospital Management Corporation, 12421 East Freeway, P.O. Box 9836 Houston, Texas 77015. 713-453-6324.

PHYSICIAN NEEDED in Carrizo Springs, Texas. Office space available in Dimmit County Medical Center, adjacent to 30 bed hospital and 60 bed nursing home. Call C. W. Vandervoort at 512-876-2550.

PRIVATE PRACTICE OPPORTUNITY with guaranteed success now available in a modern 25 bed JCAH approved private hospital and a new four doctor clinic. Located in the heart of the Gulf Coast industrial center, 20 minutes from both downtown Houston, Texas and the Space Craft Center. Clinic furnishes all overhead, including rent, supplies and personnel. To insure success, a guarantee of $3,000 per month for six months is offered. Earnings limited only by personal desire as you maintain a private fee-for-service practice. For details contact Floyd D. Pendergrass, Executive Director, Deaton Hospital, Inc., 208 North Main Street, Galena Park, Texas 77547. Phone or wire collect 713-672-6311.

TEXAS, SAN ANTONIO: EMERGENCY PHYSICIANS NEEDED for new group serving three hospitals; 65,000 ER visits a year. Fee-for-service. Departmental status. Past earning history $45,000 plus additional income for optional participation in employee health service. Write or call George Pruett, M.D., 5239 Round Table, San Antonio, Texas 78218. Telephone 512-653-3612.

GENERAL PRACTITIONER TO JOIN BUSY GROWING PRACTICE. Located in town of 18,000 on western edge of Dallas-Fort Worth Metroplex, working with two general practitioners who are in early 40s and well established. Superb, full diagnostic equipment and facilities. Enjoyable and satisfying environment. Future partnership anticipated; beginning arrangements, mutually acceptable basis, dependent upon personal and professional qualifications. Write AD-500, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: INTERNIST WITH INTEREST IN CARDIOLOGY who desires to locate in rural area with leisure office hours and not particular about large earnings to associate with two AAFP physicians. Easy access to Houston, Austin, San Antonio and Texas Gulf Coast. Three ophthalmologists, one ENT physician in community. New hospital in planning stage. Salary to start, leading to partnership. Contact Ad-501, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic adjacent to 36 bed hospital recently remodeled. Salary open, partnership available after trial period. Contact Ad-503, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIANS: Private practice (solo, partnership, groups) opportunities exist in several communities within the state of Texas. (Arlington, Grand Prairie, Levelland, Pasadena, Victoria) As a public service to these communities, we are performing a free, no obligation, service acting as a liaison between physicians interested in practice opportunities and communities in need of their services. These communities have modern, JCAH approved hospitals, modern offices, and recognized needs for additional physicians. For details call collect 615-327-9551 or write with CV to: E. J. Ryan, Jr., Corporate Director, Medical Relations, Hospital Corporation of America, One Park Plaza, Nashville, Tennessee 37203.

GENERAL PRACTITIONER OR INTERNIST WANTED (Texas license required) for Student Health Physician. Annual salary with fringe benefits and pleasant association with three other physicians to care for students. Write Dr. Robert A. Lloyd, Director of Student Health Center, North Texas State University, Denton, Texas 76203, or call 788-2331. We are an equal opportunity employer.

TWO INTERNISTS NEEDED BY INTERNAL MEDICINE GROUP of seven internists and cardiologists. Consultation and referral practice. Houston environs. Prefer one general internist and one internist with major interest in cardiology. Salary open. Excellent opportunity and living area. Multiple maximum fringe benefits. Contact Robert Walsh, Business Manager, Doctors Clinic, 1501 Broadway, Galveston, Texas 77550.

GENERAL PRACTITIONER OR INTERNIST to join medical staff of the Abilene State School, a facility for the mentally retarded under the Texas Department of Mental Health and Mental Retardation. Base annual salary $24,000-$26,500. A supplement of $1,000 possible if board certified and working full time in that capacity. Other supplemental possible, based on qualifications, experience and responsibility. Increase slated for September 1st. Forty-hour week with excellent vacation, sick and holiday plan. Good life and hospitalization plan. Progressive city of 90,000 friendly people in West Central Texas. Texas license required. Contact O. V. Milstead, Personnel Director, Box 451, Abilene, Texas 79604, AC 915 692-4053. Equal opportunity employer.

MD, GP, OR FP URGENTLY NEEDED in Groesbeck, Texas to associate with two older MDs, one plans to retire shortly. Progressive county seat, town 2,500. Several industries, bank assets 13 million dollars, cattle and gas country. New 38 bed hospital, excellent consultant only 40 minutes from Waco, Texas. Adequate time off. Contact Groesbeck Clinic, P.O. Box 470, Groesbeck, Texas 76642.

GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a younger doctor desiring family practice work. May start working for salary, negotiable. City has population of 6,000 with trade area of 20,000 to 25,000. Contact Chris S. Cruzcosa, M.D., 300 S. 5th Street, Carrizo Springs, Texas 78834. AC 512-876-5236.

UNIQUE CONCEPT: Two family MDs to start in June-July to work nine months rotating schedule, then off three months with salary. Gulf Coast, beaches, deep sea fishing, good attached hospital, salary open first year. Write, call, or come by: Medical Arts Clinic, 1711 West Wheeler, Aransas Pass, Texas 78336; AC512-758-5326.

GENERAL SURGEON (under 50 years of age) Some general practice. Needed for Northeast Texas city with no surgeon. Income $36,000-$75,000, depending on arrangement. Please reply to Ad-505, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON, BOARD CERTIFIED, NEEDED in 56-man multi-specialty clinic. Some practice experience preferred. Opportunity to head department. Eligible for partnership in two years. Medical school affiliation. Excellent beginning salary with fringe benefits. Adjacent to Texas Medical Center. Write or call W. D. Seybold, M.D., Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025. Telephone 713-526-2671.

PHYSICIAN WANTED, FAMILY PRACTICE with Texas license. Some surgical experience. New 25-bed hospital, completely equipped. Office space available. Population 3,000 plus. North Runnels Hospital, Winters, Texas. Telephone AC 915-754-5097.

AUSTIN SUBURBAN COMMUNITY DESIRES a resident physician. New office space available. New housing adjacent. Wonderful opportunity in rapidly growing community. Oak Hill area. Fifteen minutes downtown Austin. Fifteen minutes Highland Lakes. Please reply to Ad-506, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

TEXAS—PHYSICIAN WANTED: South Central Texas area. FP, internist or general surgeon oriented to FP. Two man group; fully-equipped, modern clinic, 36-bed hospital which has recently undergone major additions and renovations. 35,000 drawing area; good schools, all denominations represented. Recreational facilities include hunting and fishing. German-Czech background. Ranching and manufacturing represent major income. Reply to Medical Associates, 511 Summit Street, Schulenburg, Texas 78956. Telephone AC713-743-4131.

ER PHYSICIAN: Full/part time. Opportunity for extra income. Guaranteed minimum $250/day, often make much more. Malpractice insurance required. Relocation in Texas not necessary. Call collect AC 512-526-2344; C. D. Snyder, M.D.

GENERAL MEDICAL PRACTICE AVAILABLE in Odessa, town of 90,000, in month of July at no cost for practice or equipment. General practitioner or internist needed. For further information, contact Alan L. Hays, M.D., 400 Sam Houston, Odessa, Texas 79761, or telephone 915 337-8325.

LOCUM TENENS WANTED: Two weeks in June and two weeks in September. No surgery or OB, one doctor clinic. Small Texas town. Need vacation. Please reply to E. R. Moser, M.D., P. O. Box 272, Gladewater, Texas 75647.

PHYSICIANS: 715 bed hospital with active medical, surgical psychiatric services, is in need of general internist, hematologist-oncologist, urologist, and orthopedist, all preferably with certification. Excellent consultation, library and continuing medical education. Close affiliation with Scott and White Hospital with sharing of house staff. Probable site for medical school. Salary competitive, ample vacation and sick leave, with fringe benefits. Equal employment opportunity agency. Apply Chief of Staff, VA Center, Temple, Texas 76501.

Situations Wanted

OPHTHALMOLOGIST, 33, board eligible, university trained, military completed, married, completing retina fellowship in June 1974. Seeking association, partnership, or group but will consider all opportunities. Please reply to Ad-477, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BILINGUAL (SPANISH-ENGLISH) 29 years of age, single, female, board eligible, will complete 3rd year in OB/Gyn, July 1974 at University County Hospital. Experienced fetal monitoring, suction curettage, ultra sound, laparoscopy, colposcopy, high risk pregnancy. Seeking group practice with a composite of office, surgical, gynecology and clinical obstetrics. Please reply to Ad-492, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OSTEOPATHIC PHYSICIAN, age 29, with two years experience in emergency and general medicine, seeks opportunity for relocation in group family practice or emergency room position in large community of Central or western Texas. Please reply to Robert E. Stedman, D.O., 318 Justice Drive, Carney's Point, New Jersey 08069.

PEDIATRICIAN, 36, board certified, two years of pediatric cardiology. At the present with US Army, would like to start practice in general pediatrics; interested in solo or associate. Desire relocation in San Antonio or Houston metropolitan areas; will consider other opportunities in East Texas. Bilingual Spanish. Available August 1974. Please reply to Ad-494, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST—34, board certified, diagnostic radiology. Four years experience university and private practice. University trained in all phases including special procedures, nuclear medicine. Presently in 80% practice, 20% teaching situation. Will consider all positions and all areas in Southwest. Near immediate availability. Please reply to Ad-495, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FULLY LICENSED PHYSICIAN in resident training program would like additional responsibilities involving night or week-end coverage in family practice situation within 60 mile radius of Austin. Please reply to Ad-497, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, board eligible, married, desires to relocate in small town with good hospital. Good references, available anytime. Have Texas license. Please reply to Ad-498, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, Canadian graduate, board certified with wide experience. Wants permanent relocation in a stable community, preferably agricultural. Solo, partner, group or clinic. Desires busy practice, professionally rewarding. No general practice. City 15,000 or more. Willing to do some ER or industrial work, initially. Please reply AD-502, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

DOCTOR OF PHARMACY: Seeking employment as physician extender. Skill in prescribing, controlling, and monitoring drug therapy associated with general medicine and psychiatry. Also capable of screening patients for physician perusal. Contact Ray Manning, University of Tennessee Medical Units, 800 Madison, P.O. Box 63030, Memphis, Tennessee 38163. AC 901-525-7014.

PATHOLOGIST—44 years old, board certified, AP-CP seeks director of hospital laboratory. Desires to provide first class pathological service to progressive medical staff, Oklahoma graduate, native Texan, married, three children. Desire good schools. Please reply to AD-504, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

CLINICAL PSYCHOLOGIST, 33, licensed. Southwestern Medical School, Ph.D. Experienced in individual and group psychotherapy, inpatient milieu treatment, and psychological assessment. Member APA, AGPA, six publications. Seeks association with physician, prefer psychiatrist, share office expense, mutual referrals. Please reply to Ad-507, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

WELL ESTABLISHED 23 year practice of deceased internist, excellent staff, terms on equipment and furnishings, well planned rented office in professional center. Gulf coast town of 12,000, one hour from Houston. Hunting, fishing, golf, tennis, boating, etc. Rapidly growing area with need for physicians. Contact Mrs. Robert E. Leslie, Box 551, El Campo, Texas 77437, 713-543-2598 home or 713-543-2738 office.

LARGE, BEAUTIFULLY FURNISHED OFFICE of the late A. J. Morris, M.D., now available for lease or sale. Excellent location, across street from well established shopping center with good drug store. Adequate space for two doctors; perfect space for one. Contact Mrs. A. J. Morris, 3661 Monticello Drive, Fort Worth, 817-737-7312.

DOCTOR RETIRING: Medical clinic for sale, lease or rent. Will support one or two doctors and dentist. Competent help available. 80 bed hospital. Industrial, farm and ranch income. Excellent recreational facilities. Community support assured. Reply to Ad-496, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTICE CLINIC FOR SALE, accommodate one to three doctors. Lab, x-ray, EKG and everything necessary for general practice in Slaton, Texas. Hospital privilege available in open staff, accredited 50 bed Mercy Hospital. Fifteen miles from Lubbock and new Texas University Medical School and rapidly developing medical center. Contact Mrs. M. J. McSween, Jr., 2329 33rd, Lubbock, Texas 79411, phone 797-2050 before noon or Browning and Marriott Real Estate, Slaton, Texas, phone 828-3216 or 828-3208.

GENERAL PRACTITIONER: Excellent location between Austin and Houston for family general practitioner. Excellent community hospital and nursing home. Former doctor's practice for sale, including equipment, furniture and supplies—reasonable terms. Office space available for one or two doctors with reasonable rent. Contact Charles M. Prather, P.O. Box 809, Houston, Texas 77001.

FORT WORTH FAST-GROWING SUBURB: Space available about July 1 in medical building under construction. Contact James Lewis, DDS, Box 177, Burleson, Texas 76028. Phone 817-295-4467.

BRYAN, TEXAS—One of the fastest growing cities in the state. For sale—physician's office for general practice—physician's equipment may be purchased also. Adequate space for two doctors. For additional information contact John Hamilton, Spearman Realty, 3600 East 29th Street, Bryan, Texas 77801. AC 713-822-1534.

ESTABLISHED PRACTICE IN EXCLUSIVE RAPIDLY GROWING HOUSTON SUBURB. Beautifully furnished office in new building; 1,500 square feet; four examining rooms and lab. Ideal for family practitioner or pediatrician. Can accommodate two physicians. Will sell for value of equipment. Call after 6 p.m. AC 713-682-3790.

TIRED OF THE RAT RACE?...

Major petrochemical company has opening for PLANT MEDICAL DIRECTOR in Houston, Texas production facility. A challenging new post for a physician strong in clinical, occupational and preventive medicine, with an interest in occupational medical administration. 40-hour week. Excellent fringe benefits. Will direct occupational health program for 3300 employees. 7 nurses in existing department. Salary negotiable.

A second opening exists for STAFF PHYSICIAN in Corporate Medical Department. This physician will assist Corporate Medical Director and direct occupational health program in four major locations in Houston area.

Previous industrial experience desirable, but not mandatory for either opening. Please send resume, with minimum salary requirements, in confidence, to:

AD-493 TEXAS MEDICINE
1801 North Lamar Blvd. Austin, Texas 78701

PRIVATE PRACTICE OPPORTUNITIES

In one of the most desirable areas in the Texas Gulf Coast Area. Memorial City Professional Building, in the Memorial Drive-Spring Branch Area of Houston, Texas, has just completed a fifty-seven suite addition. The Professional Building now consists of one hundred twenty offices and is connected to a new two hundred thirty bed general hospital

Over two hundred thousand people reside within a six mile radius of the Professional Building. The physician to population ratio is excellent to produce a rewarding private practice in virtually every specialty. Particularly attractive opportunity in cardiology avialable at this time.

Write or call Howard E. Troutt, Executive Director, Memorial City Medical Center, 902 Frostwood Drive, Suite 283, Houston, Texas 77024, (713) 464-2711.

Advertising Directory

Abbott	82, 94
Beverly Hills Hospital and Clinic	119
Blue Cross-Blue Shield of Texas	38-39
Burroughs Wellcome Company	121
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
The Diagnostic Clinic of San Antonio, P.A.	30
Doctors' Park, Denton	43
Dorsey Laboratories	17
El Paso Psychiatric Clinic	43
Flint Laboratories	68-69
Ives Laboratories, Inc.	29
Mead Johnson Laboratories	34, 111
Kelsey-Seybold Clinic	97
Eli Lilly and Company	54
Marion Laboratories, Inc.	52-53
The Martin X-Ray and Radium Clinic	120
McNeil Laboratories	24
Medical Arts Clinic of Corsicana	125
The Medical Protective Company	30
Memorial City Medical Center, Houston	141
Merck Sharp & Dohme	98-100
The Pharmaceutical Manufacturers Association	92-93
William P. Poythress & Co., Inc.	124
Professional Office Buildings, Inc.	3rd Cover
Professionals' Printing & Binding, Inc.	128
The Prudential Insurance Company of America	9
Radiology Associates of Fort Worth	125
Reed & Carnrick	70
A. H. Robins Company	41-42
Roche Laboratories	1-2, 44-45, 126-127, 146-147
Roering	18-19, 31-32
Ryan Olds-Mercedes	22
Safeguard Business Systems	18
Scott and White Clinic	Back Cover
Searle & Co.	80-81, 122-123
Seaview Hospital	78
The Selwyn School, Denton	128
SK&F Co.	91
Starlite Village Hospital	120
Texas Medical Association	
Annual Session	11-14, 51, 138
Automobile Leasing Program	37
Memorial Library Fund	116
Orient Adventure	67
Scandinavian Adventure	33
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	125
The Upjohn Company	4-5
Wallace Pharmaceuticals	78-79
Warner/ Chilcott	128-129
Wichita Falls Clinic-Hospital	120
Physicians' Directory	130-138
Classified Advertisements	139-141

Editorials

HEW IGNORES DOCTORS' PSRO VIEWS: TRUSTEES PLEDGE ALL-OUT FIGHT

Texas physicians did not want PSRO, but when it became the law of the land they made a positive effort to comply with its requirements.

The Texas Institute for Medical Assessment (TIMA) was formed, uniting health care providers, governmental agencies, medical schools, and hospitals in a laudable and unprecedented pattern of cooperation. Having created this body to qualify as a physician-sponsored PSRO, Texas physicians felt that their request to have Texas designated as a single-state PSRO might reasonably be granted.

This has not been the case to date. Disregarding doctors' opinions as to how their patients would best be served, the DHEW Office of Professional Standards Review sliced our state into nine different pieces for purposes of PSRO designations.

In the face of such treatment, further attempts to cooperate with the DHEW on this issue seem to be out of the question.

Your Board of Trustees calls upon every Texas Medical Association member to give unstinting support to a campaign which will seek to negate the Secretary's decision to divide the state into nine PSRO areas, thus to fragment the profession, and have Texas redesignated as a single statewide PSRO.

Realistically, what can be done? We can seek public and legislative support. We can solicit the cooperation of allied groups. We can initiate legal action.

The President of TMA, the Board of Trustees, the Council on Medical Legislation, and the Chairman of TIMA Steering Committee have already successfully caused to be introduced and are supporting HR 13358 by Texas Congressmen Casey and Burleson which would repeal PSRO.

Your Board of Trustees is determined to overlook no legal means of accomplishing this goal.

We can put our money where our mouth is. Campaigns take money; educating voters and legislators takes money; legal action takes money.

The Board of Trustees has recommended to the House of Delegates a change in the TMA Bylaws which would permit a special dues increase of $100 in 1974 to implement these programs.

We urge that this special action be adopted.

The Trustees feel that this unusual step is warranted because a January 1974 poll indicated that 92% of Texas physicians responding disapproved of the proposed PSRO multiregions for our state.

The strength of Texas medicine would be decimated by having many small, homogenous groups designated as PSROs. Now is the time for unity, and we hereby call upon all groups which have applied, or plan to apply, for PSRO status to reconsider and join in our fight to maintain our state as a single, strong and unified whole, and support repeal of PSRO.

Quite literally, we are now in a situation where we have to pull together or be pulled apart.

John M. Smith, Jr., MD, San Antonio,
Chairman, TMA Board of Trustees.

Editor's note: See related news story, page 6.

DELEGATES, REFERENCE COMMITTEES NEED INPUT FROM TMA MEMBERS

The TMA House of Delegates will again convene Thursday, May 9, in Houston at the annual meeting of the Texas Medical Association. Business items will be formally introduced to the House on Thursday afternoon, reference committees will conduct hearings on Friday morning, and the House will consider and dispose of the business items on Saturday.

The House of Delegates consists of some 250 elected and ex-officio delegates (with about 180 alternate delegates in reserve), all of whom are eager to ascertain, to interpret, and to respond to the will and the wishes of Texas physicians. Each of the 12,000 TMA members is as important as any other member, but it would be manifestly impossible as well as impractical to assemble simultaneously all members for consideration and disposition of pertinent TMA business; consequently, the House of Delegates has been designated as the representative body to act for and on behalf of TMA members.

Input, recommendations, and expressions of opinion—even complaints and gripes—from individual physicians are most helpful to the House. The opportunity for such individual input is *always* open to every TMA member at reference committee hearings, and each physician may be absolutely certain that his remarks will be heeded and will be highly valued.

The House of Delegates is eager to reflect accurately the views of Texas physicians, and it can do so most effectively only when such views are made known. To assist TMA members in expressing themselves, therefore, and to encourage them in such expression, an article concerning forthcoming House business items is published in this issue of *Texas Medicine* (p 8).

It is hoped that many physicians will accept the democratic opportunity and privilege open to them and will make their voices heard.

Jack B. Lee, MD, San Antonio,
Speaker, TMA House of Delegates.

RENAL DISEASE FOR THE CLINICIAN

In this issue of *Texas Medicine* we begin a series of articles which together will provide a comprehensive postgraduate course in the diagnosis and management of renal disease. These articles are being prepared under the auspices of the Renal Planning Committee of the Regional Medical Program of Texas. The resources for the care of patients with kidney disease, available to Texas' practicing physicians, will be emphasized by the renal specialists from throughout the state who are writing the series.

Renal disease has been given considerable attention recently by both the lay and professional media because of the passage of PL 92-603 as an extension to the Social Security Act, and the enactment of the Kidney Health Care Act by our own state legislature. This legislation provides funding to insure the availability of dialysis and/or transplantation to all residents of the state of Texas with end-stage kidney disease. The two legislative acts represent a remarkable public commitment to provide these life-preserving medical techniques to all patients with far-advanced disease who are medically eligible. However, these accomplishments relate to but

one aspect of the many recent developments in renal medicine.

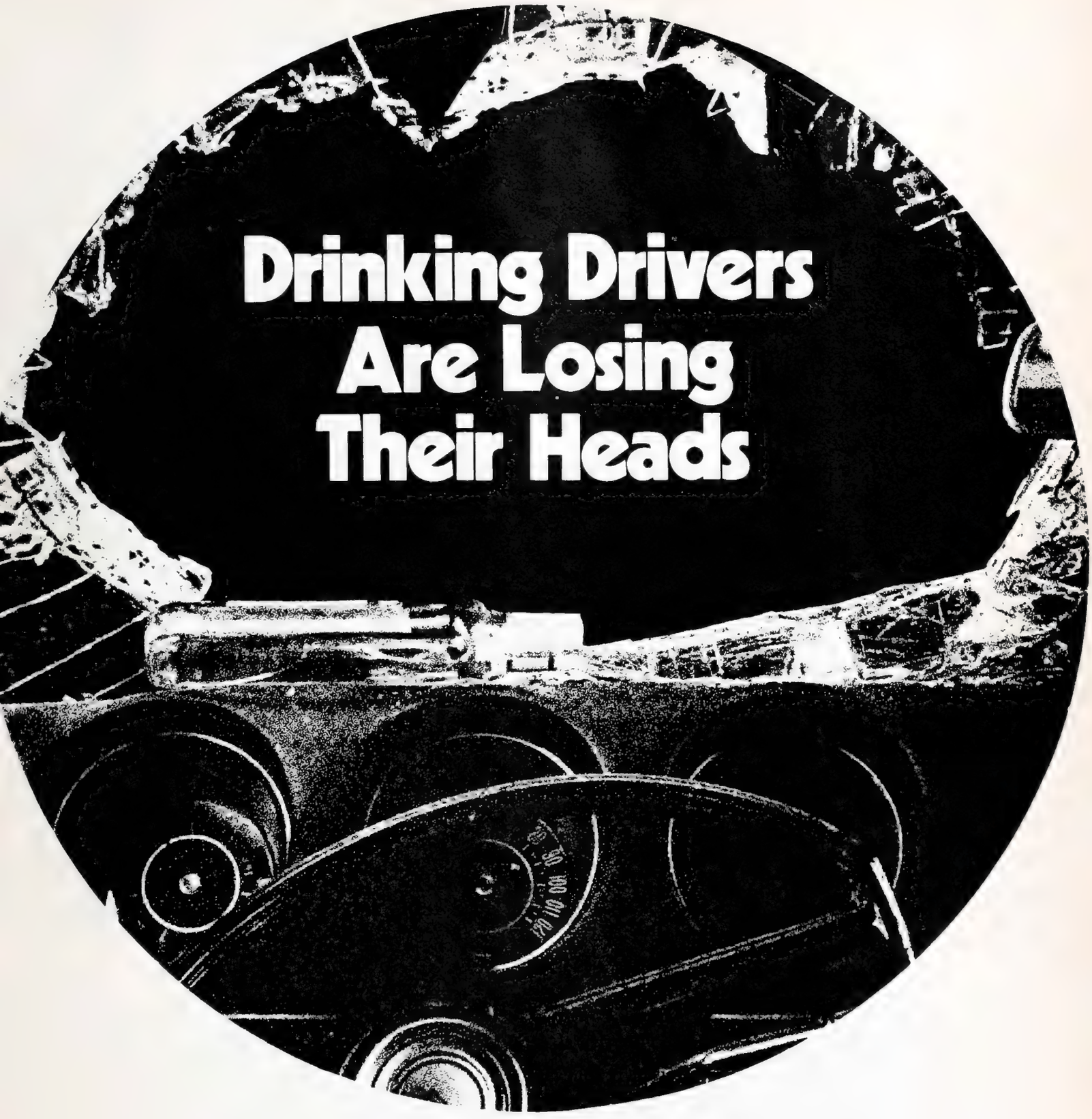
The advances in our understanding of the physiology of the kidney, which began prior to World War II and expanded in many exciting directions in the postwar years, provided the fundamental insights which made possible rational approaches to fluid and electrolyte management in patients with acute renal failure and chronic renal insufficiency. They also provided the tools to study a variety of both congenital and acquired abnormalities in renal tubular function. The later development of techniques for percutaneous renal biopsy has provided a means for the establishment of accurate diagnosis of disease by morphologic criteria, and permitted our study of the natural history of these lesions and their response to therapy. Introduction of electron microscopy and then immunofluorescence techniques have provided us with greater precision of diagnosis and the beginnings of a classification of glomerular disease based on pathogenesis rather than structural abnormality alone. Developments in subspecialties within radiology have permitted visualization of the renal vasculature by angiography, and assessment of renal function using nuclear medicine techniques. These diagnostic approaches have led to an extensive reexamination of the phenomenon of unilateral renal disease as an etiology of hypertension. Equally useful in our understanding of blood pressure abnormalities has been recognition of the importance of the renin-angiotensin system, both in the pathogenesis of unilateral renal hypertension and as a basis for further classification of patients with "essential hypertension."

The rapidly advancing field of immunology has been applied to the study of a variety of kidney disorders with far-reaching implications in glomerulonephritis, pyelonephritis, and of course, renal transplantation. These insights have formed the basis for promising new approaches to therapy. The varied metabolic and endocrine functions of the kidney appear to have greater significance each passing year. Regulation of erythropoiesis, blood pressure, and calcium metabolism all appear to be related to renal metabolic functions.

Finally, replacement of a kidney when all other therapeutic approaches have failed has become a realistic financial and logistic possibility for any medically acceptable resident of the state. Increasing numbers of facilities for center-based dialysis, limited-care dialysis, or home training have been developed throughout the state. A cooperative program in cadaveric organ sharing based on standardized tissue typing procedures, computerized tabulation of transplantation candidates, and organ preservation units at tertiary centers throughout the state have helped place Texas in the forefront of regional organ-sharing programs.

These are only some of the areas which we hope to consider in this and in coming months. Our articles will be practical in approach, aimed at providing information which can be applied directly in practice and used as guidelines concerning the indications for more specialized procedures and studies.

Marvin Forland, MD, San Antonio.



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Thoughts at Year's End

Since this is my last President's Page, I have taken the privilege of writing my thoughts about several subjects. Please understand these are my own thoughts and do not reflect the position of the Texas Medical Association, although I feel most conservative physicians do agree with me.

I must again mention PSRO. Although the HEW officials deny this, it appears to me they are only interested in cost containment and have absolutely no regard for quality patient care. Too, I feel another purpose of this law is to fragment and destroy the large state medical societies with resultant destruction of our influence in the state and in the national halls of Congress. I strongly support fighting HEW on this in the public arena, in the legislature, and through all legal means in the courts.

I would be remiss if I did not mention my feelings about the Internal Revenue Service and the repressive tax laws of our country—repressive because they penalize industriousness and reward mediocrity. The "Big Brother" organization policing these laws seems to answer to no one and can make arbitrary decisions—always in favor of the government. In my opinion, the highhanded harassment of *some* of their agents rivals that of the Gestapo. These agents and the laws permitting their actions can only be changed by sweeping tax law reforms. If America is to continue to be strong, this must be accomplished.

We must utilize joint action to challenge the authority of the Cost of Living Council to impose price controls on physicians. Their capricious action in their total disregard for the increasing expenses in each of our offices must be met *head on*.

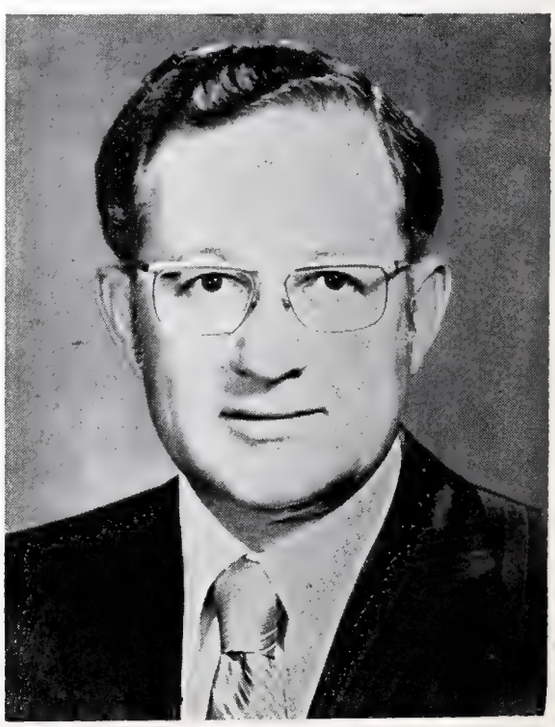
This has been a good year. With the assistance of the officers, staff, and membership, much has been accomplished; much more needs to be accomplished. Under the leadership of Dr. Ed Schmidt, I know the Texas Medical Association will thrive and prosper and continue to stand at the fore in our fight with government bureaucracy.

As Dr. Jean F. Crum, the immediate past-president of the California Medical Association, said, "It was a great experience—but once is enough!"

God bless each of you.

Charles B. Dryden M.D.

Charles B. Dryden, MD, President, Texas Medical Association.



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Contents

SCIENTIFIC ARTICLES

41 Cancer of the endometrium
Dr. Hugh R. K. Barber; Dr. Barry Reisman; Dr. Sheldon C. Sommers; Dr. Edward A. Graber

59 Complications of amniocentesis
Capt Philip J. Mead; Lt Col Robert E. Harris

62 Familial occurrence of ganglioneuromas
Dr. Jon F. Bergstrom; Dr. John M. Long

73 Hypotonic gastrointestinal x-ray studies
Dr. Charles W. Yates, Sr.; Dr. Charles W. Yates, Jr.; Dr. James M. Keegan

EDITORIAL

114 Texas medical schools aim toward full funding and maximum use
Dr. G. V. Brindley, Jr.

118 Doctors' incomes: no apologies needed
Dr. E. W. Schmidt

FEATURES

80 Accelerated degree programs: the deans' points of view

83 Current TMA policy: medical guidelines for abortion

NEWS

6 Medical schools graduate 599

7 TMA names recipients of scientific writing awards

8 Dallas paper backs doctors on PSRO

10 TMA insurance programs

10 Liability companies surveyed

15 UTMB grant

15 PSRO flyer available

15 Delphi technique success

16 Grants to support emergency phone networks

16 State health plan

19 Insurance dividends

19 TB policy

20 Radiation therapy study

DEPARTMENTS

21 Capital Comments

29 Continuing Education

33 Coming Meetings

38 Information for Authors

85 Legal Protection: Facts You Should Know

86 Medicine and the Law

88 Medical Newsmakers

89 Questions/Answers

90 Medicine in Literature

93 Recent Deaths

ON THE COVER

Cancer of the endometrium is increasing, and in fact stands in second place among the most common gynecological cancers. The cover spotlights the comprehensive review of endometrial cancer which begins on page 41.

NEXT MONTH

In August, Texas Medicine plans to publish articles on free-standing outpatient surgical facilities; outpatient surgery; managing the severely ischemic lower extremity; and use of automatic staplers in vaginal hysterectomy, anterior colpoplasty, and posterior colpoperineoplasty. Also, there will be roundup of events at the AMA Annual Convention in Chicago.

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"Probably" effective: For estrogen deficiency-induced osteoporosis, and only when used in conjunction with other important therapeutic measures such as diet, calcium, physiotherapy, and good general health-promoting measures. Final classification of this indication requires further investigation.

Contraindications: Short acting estrogens are contraindicated in patients with (1) markedly impaired liver function; (2) known or suspected carcinoma of the breast, except those cases of progressing disease not amenable to surgery or irradiation occurring in women who are at least 5 years postmenopausal; (3) known or suspected estrogen-dependent neoplasia, such as carcinoma of the endometrium; (4) thromboembolic disorders, thrombophlebitis, cerebral embolism, or in patients with a past history of these conditions; (5) undiagnosed abnormal genital bleeding.
Warnings: Estrogen therapy should not be given to women with recurrent chronic mastitis or abnormal mammograms except, if in the opinion of the physician, it is warranted despite the possibility of aggravation of the mastitis or stimulation of undiagnosed estrogen-dependent neoplasia.

The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, retinal thrombosis, cerebral embolism and pulmonary embolism). If these occur or are suspected, estrogen therapy should be discontinued immediately.

Estrogens may be excreted in the mother's milk and an estrogenic effect upon the infant has been described. The long range effect on the nursing infant cannot be determined at this time.

Hypercalcemia may occur in as many as 15 percent of breast cancer patients with metastases, and this usually indicates progression of bone metastases. This occurrence depends neither on dose nor on immobilization. In the presence of progression of the cancer or hypercalcemia, estrogen administration should be stopped.

A statistically significant association has been reported between maternal ingestion of diethylstilbestrol during pregnancy and the occurrence of vaginal carcinoma in the offspring. This occurred with the use of diethylstilbestrol for the treatment of threatened abortion or high risk pregnancies. Whether or not such an association is applicable to all estrogens is not known at this time. In view of this finding, however, the use of any estrogen in pregnancy is not recommended.

Failure to control abnormal uterine bleeding or unexpected recurrence is an indication for curettage.
Precautions: As with all short acting estrogens, the following precautions should be observed:

A complete pretreatment physical examination should be performed with special reference to pelvic and breast examinations.

To avoid prolonged stimulation of the endometrium and breasts in climacteric or hypogonadal women, estrogens should be administered cyclically (3 week regimen with 1 week rest period—withdrawal bleeding may occur during rest period).

Because of individual variation in endogenous estrogen production, relative overdosage may occur which could cause undesirable effects such as abnormal or excessive uterine bleeding, mastodynia and edema.

Because of salt and water retention associated with estrogenic anabolic activity, estrogens should be used with caution in patients with epilepsy, migraine, asthma, cardiac, or renal disease.

If unexplained or excessive vaginal bleeding should occur, reexamination should be made for organic pathology.

Pre-existing uterine fibromyomata may increase in size while using estrogens; therefore, patients should be examined at regular intervals while receiving estrogenic therapy.

The pathologist should be advised of estrogen therapy when relevant specimens are submitted.

Because of their effects on epiphyseal closure, estrogens should be used judiciously in young patients in whom bone growth is incomplete.

Prolonged high dosages of estrogens will inhibit anterior pituitary functions. This should be borne in mind when treating patients in whom fertility is desired.

The age of the patient constitutes no absolute limiting factor, although treatment with estrogens may mask the onset of the climacteric.

Certain liver and endocrine function tests may be affected by exogenous estrogen administration. If test results are abnormal in a patient taking estrogen, they should be repeated after estrogen has been withdrawn for one cycle.
Adverse Reactions: The following adverse reactions have been reported associated with short acting estrogen administration:
nausea, vomiting, anorexia
gastrointestinal symptoms such as abdominal cramps and bloating
breakthrough bleeding, spotting, unusually heavy withdrawal bleeding (See DOSAGE AND ADMINISTRATION)
breast tenderness and enlargement
reactivation of endometriosis
possible diminution of lactation when given immediately postpartum
loss of libido and gynecomastia in males
edema
aggravation of migraine headaches
change in body weight (increase, decrease)
headache
allergic rash
hepatic cutaneous porphyria becoming manifest
Dosage and Administration: PREMARIN should be administered cyclically (3 weeks of daily estrogen and 1 week off) for all indications except selected cases of carcinoma and prevention of postpartum breast engorgement.

Menopausal Syndrome—1.25 mg. daily, cyclically. Adjust dosage upward or downward according to severity of symptoms and response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

If the patient has not menstruated within the last two months or more, cyclic administration is started arbitrarily. If the patient is menstruating, cyclic administration is started on day 5 of bleeding. If breakthrough bleeding (bleeding or spotting during estrogen therapy) occurs, increase estrogen dosage as needed to stop bleeding. In the following cycle, employ the dosage level used to stop breakthrough bleeding in the previous cycle. In subsequent cycles, the estrogen dosage is gradually reduced to the lowest level which will maintain the patient symptom-free.

Postmenopause—as a protective measure against estrogen deficiency-induced degenerative changes (*e.g.* osteoporosis, atrophic vaginitis, kraurosis vulvae)—0.3 mg. to 1.25 mg. daily and cyclically. Adjust dosage to lowest effective level.

Osteoporosis (to retard progression)—usual dosage 1.25 mg. daily and cyclically.

Senile Vaginitis, Kraurosis Vulvae with or without Pruritus—0.3 mg. to 1.25 mg. or more daily, depending upon the tissue response of the individual patient. Administer cyclically.
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NEWS

Record 599 graduate from state medical schools; projections show continuing increase in students

A record 599 students graduated from the state's medical schools at the culmination of the spring term.

The number of graduates from each school were as follows: Baylor College of Medicine, 145; Texas Tech University School of Medicine, 24; University of Texas Medical School at San Antonio, 96; University of Texas Medical Branch at Galveston, 190; University of Texas Southwestern Medical School at Dallas, 112; and University of Texas Medical School at Houston, 32.

The spring commencement ceremonies marked the first graduation for the Texas Tech school and the second for the UT Houston medical school. Of particular significance to the state is the fact that 50 of the UT San Antonio graduates will remain in Texas for their internships or residencies. All but two of the 31 new physicians from UT Houston are Texas residents. In addition, Baylor graduated 64 home state medical students, twice as many as in 1970.

Graduates increasing

The figures evidence the recent expansion of medical education within the state. In 1973, 476 new physicians received MD degrees with the total only 318 five years ago. The construction of new facilities and the incorporation of various accelerated programs are responsible for greater numbers of students across the board at Texas schools.

With the institution of its optional three year curriculum, Baylor is educating 68% more physicians today than in 1970. The Southwestern graduating class marks the first incremental increase toward annual graduating classes of around 200 by 1978.

A year by year projection of physician (MD and DO) enrollments and graduates to 1980, compiled by Dr. Charles C. Sprague, president of The University of Texas Health Science Center at Dallas, shows a continued increase in these categories each year. Total first year MD enrollment in 1980 is projected to be 1,088 students compared to 787 in 1974. Total first year DO enrollment is currently foreseen at a steady 60 students for each year with no anticipated increase. Total MD and DO enrollment for 1980 is projected to be 4,242 compared to 2,843 in 1974. Total graduates each year are projected to increase progressively to 1,002 by 1980 with the largest single year increase

coming in 1979.

TMA urges support for existing schools

In regard to the outlook on medical education, the TMA House of Delegates, during its recent meeting in Houston, reaffirmed the TMA position supporting full financing for existing medical schools. The House adopted a recommendation of the Council on Medical Education and Hospitals that TMA continue to work toward ample financial support legislatively for development of the six existing medical schools in the state in order to maintain the highest standards for medical education and to assure the highest quality of medical care for citizens of Texas. This resolution reemphasized TMA's stand that it is more economical for our state to fully support existing schools in achieving manpower goals than to create new institutions. In 1973, it was estimated that the percentage of doctors was increasing twice as fast as the population of the state.

TMA names recipients of scientific writing awards

The Texas Medical Association has announced the winners of its ninth annual Texas Medicine Award competition for excellence in scientific writing by a Texas medical student.

Selected as recipient of the top award is Clyde Fagg Sanford III, a third year student at The University of Texas Southwestern Medical School at Dallas. The second place winner is Dr. David B. Redwine, a recent graduate of Baylor College of Medicine in Houston and currently a rotating intern at the University of Oregon School of Medicine in Portland.

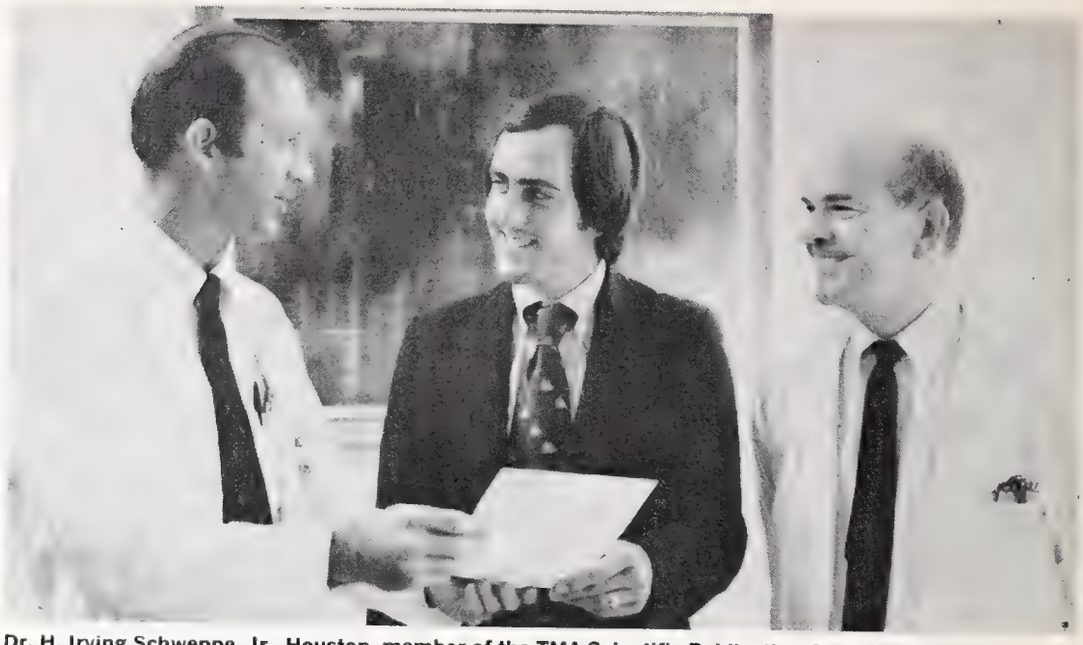
Each winner was presented a certificate and a cash prize in special award ceremonies conducted at their respective schools June 3. First place earned $300 with second place receiving $100. The winning articles will be published in *Texas Medicine* next fall.

Sanford's winning paper, "Coronary Heart Disease Rehabilitation," was prepared while he was participating in the summer externship program of the Department of Physical Medicine and Rehabilitation at Southwestern.

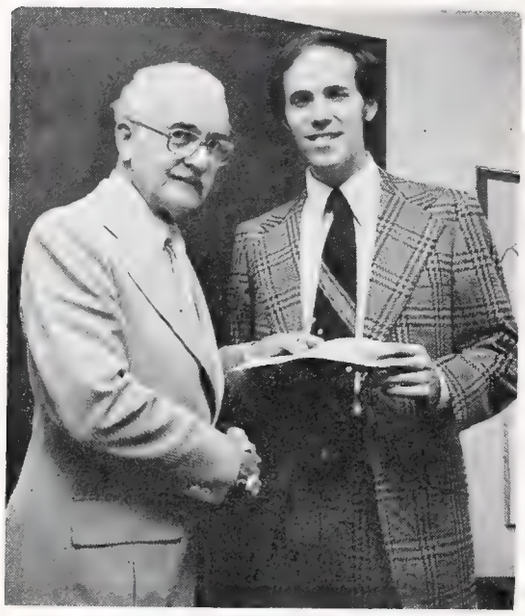
The second place article, "Complete Heart Block Due to Secondary Tumors of the Heart: Report of a Case and Review of the Literature," was prepared while Redwine was a student at Baylor.

A native of Greenville (Tex), Sanford graduated with honors from

NEWS



Dr. H. Irving Schweppe, Jr., Houston, member of the TMA Scientific Publication Committee, presents second place award for excellence in scientific writing to Dr. David Redwine as Dr. Joseph M. Merrill, Baylor executive vice president, looks on.



Dr. Don G. Harrel, TMA trustee, presents the 1974 Texas Medicine Award to Clyde Fagg Sanford, III, in Dallas.

Southern Methodist University in 1972 with a BA degree in chemistry. He is a member of Phi Beta Kappa and Phi Beta Pi medical fraternity.

Redwine, originally from Fort Worth, holds an AB degree from Leland Stanford Junior University, Stanford, Calif.

The TMA award was established in 1966 to recognize the best scientific article written by a medical student while enrolled in a Texas medical school. Articles must deal with a subject within the realm of the basic sciences or medicine and must be original and unpublished. Excellence of scientific work and competence in the writing craft are the judging criteria.

Dallas Morning News backs doctors on PSRO

An editorial entitled "Bad Medicine" in *The Dallas Morning News* May 27 supported the Texas Medical Association's stand regarding Professional Standards Review Organizations (PSROs).

The newspaper stated, "All this represents a disturbing use of government power, and never mind that the PSROs are doctor-constituted: They are adjuncts nevertheless of the Department of Health, Education and Welfare. Never before has government intruded so far into the practice of medicine."

The editorial also pointed out the effects of the PSRO concept beyond the immediate application to the Medicare and Medicaid programs. It said, "President Nixon's health insurance proposal would put all health care under PSRO supervision. So much in that case, for your doctor's freedom to exercise his own judgment. He

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would treat his patients the way the PSRO told him to treat them. No better, no worse."

The *News* concluded, "But Texas doctors, through the Texas Medical Association, are going to take legal and legislative action against the PSRO concept. And so are the doctors of other states. They want PSROs wiped off the statute books. They should fight as hard as they can; for this is one battle they cannot afford to lose."

TMA insurance programs to continue with Prudential

The House of Delegates of the Texas Medical Association affirmed the Executive Board's decision to continue the Association's insurance program with the Prudential Insurance Company of America during its regular session in Houston in May.

Action was based upon recommendations made by the Committee on Association Insurance Programs and the Council on Medical Service and Insurance following negotiations which produced amicable agreements with Prudential on the manner in which subsequent matters relating to the delivery of health care would be considered, a better financial arrangement, and an improved working agreement.

Insured members will receive a cost savings due to an estimated reduction of Prudential's retention by .9% in 1974 and another .5% in 1975. These reductions are significant when applied to the total annual premium of the program.

Improvements in the working agreement include a clause which allows the Association to terminate the group on any quarter without loss of accrued dividends. Under the previous agreement, accrued dividends were not disbursed unless termination was effected on the anniversary date.

In addition safeguards were added to the arrangement which allow for the combining of coverages for experience purposes. The original provision required that any transfer of funds between the Association's six insurance plans would be rectified so that the premiums paid by members insured under a plan with good loss experience would not be used to subsidize another plan with poor experience.

The new arrangement includes a clause which prevents the possibility of dilution of dollars when funds are transferred for even a short period.

A copy of the new Memorandum of Agreement and the Master Policy are available at TMA headquarters and may be examined by members at any time.

Liability companies surveyed

The Texas Medical Association's Committee on Professional Insurance, recently conducted a study of professional liability coverage written for practicing physicians in Texas.

A total of 83 insurance companies and brokers had been previously identified by the TMA 1973 Malpractice Insurance Survey as providing Texas physicians with liability coverage. Of these, 12 companies, writing about 95% of the policies for Texas physicians, were surveyed regarding the availability of liability insurance. Nine companies returned the questionnaires.

Those indicating activity in the medical liability field included Aetna Life and Casualty Company, the Medical Protective Company, St. Paul Fire and Marine Company, The Travelers Insurance Company, and United States Fire Insurance Company. Casualty Indemnity, answering affirmatively, has since announced that it will not be renewing professional liability insurance policies for physicians. Guaranty National Insurance Company has agreed to underwrite most of the physicians that Casualty Indemnity is canceling.

The companies indicating that they

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Opinion & Dialogue

Is there a need for a drug compendium?

Government Health Official

Henry E. Simmons, M.D.
Deputy Assistant Secretary for Health
Department of Health, Education and Welfare

A drug compendium of the type I envision would fill a definite need for the practicing physician. Such a compendium would give him all the information necessary for using a drug intelligently, and it would do so in a clear, concise, convenient, objective and balanced fashion.

What a Compendium Should Contain

I believe the compendium should inform the doctor what a drug will do, when he should use it, for what type of patient, for how long, in what dose, what benefits his patient is likely to obtain, the risks involved, and cross-reactions with other drugs.

The information would be based on the package insert and have the same legal status. In fact, a complete compendium with complete and current information might even eliminate the necessity

Maker of Medicine

Joseph F. Sadusk, Jr., M.D.
Warner-Lambert Company

A drug compendium, or preferably compendia, should, I believe, be private, not federal, in sponsorship. They should contain comprehensive listings of drugs available for prescribing. They should be single, legibly printed volumes of reasonable size, updated quarterly or semiannually and completely revised every year.

Function of a Compendium

A compendium should furnish the following information on drugs in the following order: indications for use, side effects, adverse drug reactions, contraindications, drug interactions, drug dosage and the dosage forms marketed. Drug prices should not be included because they vary so widely and change rapidly.

No compendium should set forth drugs of choice or discuss relative efficacy. Such questions must be left for the practicing physician to decide, whether on the basis of the medical literature, his own clinical experience, advice of colleagues, information supplied by manufacturers, and so on.

Nor should a compendium undertake to educate the doctor on how to use drugs. Rather, it must be a reference source designed primarily to refresh his memory as to drugs he may not use regularly. It

for a package insert in many instances. This would constitute a substantial saving for the manufacturer.

By a complete compendium, I do not mean a volume of prohibitive size. You don't need a book describing 25,000 products with an enormous amount of repetition. Rather, drugs should be arranged by class. Mutually applicable information would be provided, along with brief discussions pinpointing differences in specific drugs of that class. Listings would be cross-indexed in a useful way.

Other Available Documents as Sources of Information

Existing references such as PDR and the AMA Drug Evaluation are obviously useful but they are incomplete. Either they are not cross-referenced by generic name and do not group drugs with similar characteristics, or they do not list all the available and legally marketed drugs. And some of those omitted may be very useful. On the other hand, drugs made by more than one supplier, tetracycline for example, may be fully described a dozen times in the same book.

While perhaps PDR could be rearranged and cross-indexed with generics included, and while the AMA Drug Evaluation might also be modified and expanded, I am not sure that the end result would have all the attributes required for a useful compendium. At the same time, you would run the risk of amassing a voluminous and unwieldy tome.

Should Editorial Comments Accompany the Listings?

Subjective judgments, in my opinion, have no place in a compendium. However, if there is substantial evidence based on a sound body of science concerning relative efficacy of several drugs, certainly that information should be included. The committee of experts compiling and editing a particular section would also have to assess and indicate instances where a meaningful difference between drugs is pertinent.

Sponsorship, Compilation and Editing

Producing a book like this would undoubtedly be difficult and demanding. It would obviously take a great deal of talent and expertise, and would require a varied and experienced group, ranging from writers and editors to highly skilled clinicians and pharmacologists. Style, format and clarity of language would play an important part in determining the usefulness of the book. And it should be updated periodically and completely revised annually.

I have no opinion whether the government or the private sector should sponsor and/or finance the compendium. What is most important is that the compendium be an authoritative, objective and useful source of information for the doctor to have at hand as a ready reference.

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should in no way imply control over the practitioner's prerogatives.

Why Another Compendium?

A practicable, single-volume compendium cannot, nor is it necessary to, include all drugs on the market today. From my practice of internal medicine for some 15 years, my experience as a consultant, and as a faculty member of four or five medical schools, I would estimate that a doctor uses only 30 to 35 drugs regularly. The 1972 Physicians' Desk Reference, incidentally, contained about 2,500 entries.

As to whether there should be a federal compendium, in my opinion, as stated earlier, the answer is easy—there should *not* be one. The proposal assumes that existing compendia are inadequate. We're not sure of that at all. Whatever its imperfections, the present drug information system in the U.S. is open, multifaceted, pluralistic and extensive. Good compendia exist, as well as other ample sources on drug therapy, ranging from journal literature through AMA Drug Evaluation to company materials. Not all physicians may use such sources as often or as well as they should, but that is the fault of the man, not of the sources.

In any event, rather than produce another book, it makes much more sense to work on improving existing compendia, and perhaps they could, as knowledge advances, include more accumulated clinical data and experience, and more information on drug interactions and adverse reactions.

Implications of a Federal Compendium

Take a hard look at the implications of a federal compendium. It would have the force of law, virtually dictating what drugs to use and how to use them. In effect, it would be a regulatory document with legal or quasi-legal status, posing medical/legal problems similar to those the doctor may now encounter if and when he departs from the provisions of the package insert. A compendium under federal aegis would tend to restrict decisions on drug therapy to one orthodox level—a most dangerous trend for medicine.

New Compendium—A Medical Option

I detect no ground swell of initiative or support whatsoever for a federal compendium—or, for that matter, for a new compendium of any type. A 1969 PMA survey conducted by Opinion Research Corporation found that only 15 per cent of those physicians interviewed felt a new compendium was needed. And a large majority did not favor the involvement of the federal government if one were to be created, preferring instead a nongovernmental consortium.

Even if we come to a time when the medical profession itself opts for a new kind of compendium, it should be handled and financed, ideally, outside both government and industry. Final review and editorial authority could be delegated, say, to specialty bodies and medical societies—but above all, *not* the government.

Surely the health care system in the United States has far more vital matters to consider than the extensive cost and effort that would have to go into the preparation and maintenance of a new, monolithic compendium, and especially one bearing the imprimatur of the federal government.

Opinion & Dialogue

What is your opinion, doctor? We would welcome your comments.

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What does man have in common with Samson?

Neither man nor the gorilla can synthesize vitamin C. Interestingly, the slow loris, a primate much further down the evolutionary scale, can convert L-1,4-gulonolactone to ascorbic acid in its liver and presumably does not require an exogenous source of ascorbic acid.

Because man can neither synthesize vitamin C nor store most of the water soluble vitamins, these nutrients must be replenished continuously in order to maintain normal tissue levels.

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were not currently an active market for the insurance were Continental Insurance Company, Insurance Company of North America, and Consolidated Lloyds.

Others included Hartford Accident and Indemnity Company, Liberty Mutual Insurance Company, and Pacific Indemnity Company. During the past year the Committee on Professional Insurance has been studying the possibility of TMA's sponsoring a group program of professional liability insurance. *Texas Medicine* will keep members apprised of the Committee's work.

UTMB receives development grant

The National Endowment for the Humanities has awarded The University of Texas Medical Branch a five year development grant in the amount of $371,398 for the purpose of strengthening programs of the Institute for the Medical Humanities.

The grant proposal was submitted by Dr. Chester R. Burns, director of the UTMB History of Medicine Division, who will serve as director of projects funded by the grant.

Dr. Burns said, "This grant will enable us to develop our teaching programs in several significant ways. We will add additional fulltime faculty to our staff, and we will develop new multidisciplinary teaching programs that involve both humanistic scholars and health professionals."

He continued, "Members of this Institute are providing opportunities for health professional students to continue their liberal education during professional studies. Furthermore, we are interested in reexamining the educational, scientific, and practical aspects of health professions from humanistic viewpoints."

PSRO flyer available to TMA membership

The Texas Medical Association has announced to its membership the availability of a flyer to inform patients and the public about the effects of Professional Standards Review Organizations (PSROs).

The flyer was written primarily to inform patients about the impact of PSRO provisions of PL 92-603, and their potential for interfering with doctor-patient relationships and the confidentiality of medical records.

The pamphlet is part of a campaign of public and professional education regarding PSRO which has been undertaken by officers and the Board of Trustees, upon direction of the TMA House of Delegates. Many facets of communication will be used in the program.

The House of Delegates has called for wide distribution of the flyer which is available in quantity, without charge, to TMA members.

At press time over 400,000 orders had been received from Texas doctors.

Delphi technique success in project

The Regional Medical Program of Texas has announced that the health needs assessment project, sponsored by RMPT in cooperation with the Capital Area Planning Council, has concluded that the Delphi technique provides an effective way of eliciting the opinions of health care leaders in an effort to determine health care problems and their possible solutions.

The Delphi technique, as used in the project and reported on in *Texas Medicine*, December 1973, p 11, employs a panel of experts, each offering his written opinions on matters under study. This particular study involved the projection of the future of health care delivery in the ten-county CAPCO

NEWS

region.
Of the ten major problem areas identified by the project, the high cost of health care and the lack of physicians ranked at the top of the list.
Absence of effective preventive medical and dental health programs, inadequate emergency care, poor coordination of health related social services, and underutilized and duplicated facilities and equipment followed in order.
Other problems were the public's lack of knowledge of available health services and how to gain access to them, inaccessibility to health services due to location or lack of transportation, lack of health care personnel other than physicians, and lack of personal concern and understanding between patients and health care providers.
According to RMPT, rural and urban panelists and providers and non-providers differed significantly in their opinions of the rankings of these problems.
Suggested solutions included health maintenance organizations, neighborhood health centers, comprehensive national health insurance, mobile health units and teams, and nurse practitioners.
The RMPT staff is preparing a manual detailing the method for replicating the Delphi study in other areas.

Grants to support emergency phone networks

Forty-four grants totaling $15 million have been awarded to urban and rural regions in 32 states and Puerto Rico, including Victoria (Tex), for multicommunity emergency medical networks which will provide citizens central telephone numbers to call in the event of accident, heart attack, or other medical emergencies.

The grants are provided by the Robert Wood Johnson Foundation. The objective is to demonstrate the advantages of a centralized communications system in the rapid dispatch of ambulances by trained professionals serving large geographic regions.
The program is being administered by the National Academy of Sciences, Washington, DC.

Emergency telephone systems are already in operation in about 250 communities, serving about 10% of the US population. During its June 1973 meeting in New York, the House of Delegates of the American Medical Association adopted a resolution, submitted by the Texas delegation, supporting the designation of a universal emergency phone number.

State health plan approved

The Governor's Office of Comprehensive Health Planning has announced a new concept for the development of the Texas State Health Plan which has been approved by the State Health Advisory Council and by the state's health planners.

The plan will make use of available services as the criteria for determining the quality of health care delivery capability in any specified area of the state. The Texas State Comprehensive Health Plan will develop on a time basis the minimal requirements for Texas citizens to reach a location of specific health service capability. The project will provide a basis for coordination and determination of inpatient and outpatient requirements of any size community.

In addition, plans call for the development of criteria of multipurpose facilities that will permit more availability at a local level of health care services. An ongoing capability study will determine priorities and their corrective action (as the responsibility of the local planning group). Priorities will be established on the basis of overall reports and priorities of individual

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areas.
The first phase of the project is currently underway. This includes the compilation of a list of services that are available to the public in sections of the state. The entire plan is projected to take several months of work before completion.

Insurance committee discusses current programs, dividends

Payment of dividends, a broader range of coverage, and effects of inflation on the cost of hospitalization were among items recently discussed by the Committee on Association Insurance Programs.
Dr. Richard L. Vardy, chairman, advised that members enrolled under plans in the long term disability income program which provide for a 30 or 180 day waiting period received a 20% cash dividend for the policy year ending on Nov 1, 1973. The 20% was the second highest dividend paid under the disability program since the first dividend was paid in 1961.
Members insured under the disability plan with no waiting period for accident and seven days for sickness did not receive a dividend because losses under this plan were higher than normal.
A 10% cash dividend was paid to those insured under the office overhead program. This was the second dividend paid since 1969 and it is considered a good record for a program only four years old.
Dr. Vardy carefully pointed out that the Committee reaffirmed its previous decision to pay dividends only under programs whose premium dollars produced a surplus. This arrangement provides for an equitable distribution of costs to the members insured in various programs.
Other actions by the Committee included initial steps to increase the maximum monthly benefit for which eligible members may apply under the long term disability and office overhead programs from $1500 to $2000, and to increase the lifetime maximum under the major medical program from $100,000 to $250,000 per person. An option which would provide broader benefits and more extensive payment for professional fees was also recommended for the major medical program.
All changes are subject to additional approval, but implementation is possible this year.
The cost for major medical coverage continues to be plagued by inflation and the Committee anticipates that an immediate rate increase will be necessary. Dr. Vardy mentioned that this program experiences the greatest utilization of any of the programs and that historically claim payments are a high percentage of the premiums paid.
Throughout the years, the major medical program is the only TMA program which has required rate increases. Most other programs have enjoyed dividends, rate reductions or improvements in benefits at no increase in cost.
Over 15,000 certificates are now in force and the annual premium has almost tripled since Prudential Insurance Company of America became the underwriting company in 1969.

TB policy changes

The Division of Tuberculosis Services of the Texas State Department of Health has issued a major change in the policy statement regarding the follow-up of tuberculosis patients. Effective immediately, the new policy states, "Tuberculosis patients who complete adequate chemotherapy should be considered cured. They have no need for routine lifetime periodic recall for x-ray or examination. Indeed, perpetuating lifetime follow-up of such treated patients diverts clinic personnel and resources from the crucial task of providing services for those who really need them."
The policy specifies that highest pri-

NEWS

ority should be given to prompt and thorough treatment for newly diagnosed patients and emphasizes the importance of medical supervision during the early months of outpatient chemotherapy. Patients known to have had tuberculosis without chemotherapy, who are still being followed, should receive preventive treatment. Contacts of patients with newly diagnosed tuberculosis and other high-risk infected persons should be sought and should receive preventive treatment.

According to the new policy, persons who have responded well to treatment and have completed the recommended course of therapy should be told to expect their recovery to be permanent. The diagnosis of treated tuberculosis becomes part of their medical history. Instructions to be given to discharged persons are included in the policy. In addition, the policy contains suggestions for special treatment programs for patients not responding to treatment.

The statement concludes, "Continuing periodic chest roentgenograms and bacteriologic examinations should be considered only for persons in whom all attempts at therapy have failed. If such persons are in occupations where infectiousness may have serious consequences (such as some school and hospital personnel) they should be examined more than once a year or, if feasible, transferred to areas where there are minimal consequences to contacts if the person becomes infectious."

Study to evaluate radiation therapy

Three Texas Medical Association members are among the physicians spearheading a major cancer study program aimed at evaluating radiation therapy treatment.

Drs. Robert D. Moreton and Lowell S. Miller of Houston and Dr. Dale E. Fuller of Dallas are members of committees set up by the American College of Radiology (ACR) to establish radiation treatment guidelines.

The program is being funded by a $1.5 million grant by the National Cancer Institute to the ACR.

The use of radiation therapy in the United States and Puerto Rico will be documented region by region and criteria will be developed for optimal radiation therapy. Data will be gathered on the numbers of patients treated, types of cancer, the availability of professional technical staff, space, equipment, financial and economic factors, services, and patterns of referral.

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment media	Original price 9-30-68	Current adjusted price 4-30-74	% Change from 9-30-68
Mercantile National Bank Stock Fund	$10.25	$ 9.34	− 8.88
Loomis-Sayles Capital Development Fund	14.20	12.64	−10.99
T. Rowe Price Growth Stock Fund[2]	25.93	12.75	− 1.70
Loomis-Sayles Mutual Fund	16.82	17.25	+ 2.56
Stein Roe & Farnham Balanced Fund	23.34	23.65	+ 1.33
Mercantile Bank Fixed Income Fund	10.00	11.02	+10.20
Standard & Poor 500 Stock Average	101.34	90.31	−10.88
Dow Jones Industrial Average	935.79	836.75	−10.58

[1]Includes accumulated dividends and capital gains since 1968.

[2]Stock split two for one, May, 1973.

CAPITAL COMMENTS

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

AUSTIN: On June 5 the Constitutional Convention of Texas overwhelmingly adopted Article X, Section 15, of the General Provisions Committee's report. This action means that the proposed Constitution to be submitted to the people for ratification will have in it the exact language of Article XVI, Section 31, of the current Constitution relating to medical practitioners (see *Texas Medicine*, November 1973, p 115). This vote of 146 to 5 followed recommendations of the Texas Medical Association in urging retention of this section in any future constitutional revision efforts. The section as adopted reads as follows:

> The Legislature may pass laws describing the qualification of practitioners of medicine in this state, and to punish persons for malpractice, but no preference shall ever be given by law to any schools of medicine.

AUSTIN: The Joint Senate-House Committee on Human Resources of the Texas Legislature has announced proposed hearings on the effect of the federal health law and policy on the health care system in Texas, especially in regard to health maintenance organizations, certificate of need, professional standards review organizations, and financing the health care of the medically indigent. The hearings will be held in San Antonio on Aug 15 and 16; Lubbock, Aug 29 and 30; Rio Grande Valley, Sept 19 and 20; Dallas-Fort Worth, Oct 3 and 4; and Houston, Oct 17 and 18. The Committee announced "that these hearings will serve as the basis for Committee meetings in Austin in November and December, from which we hope to determine if legislation is needed, and if it is, to develop a comprehensive legislative package for the session beginning in January 1975."

WASHINGTON: HR 15090 has been introduced by Rep Omar Burleson (D-Tex) relating to a series of amendments to the PSRO law and related sections of the Social Security Act. These amendments would correct many of the criticisms which have been leveled by the medical profession at the PSRO law.

AUSTIN: On June 10 the Contitutional Convention of Texas adopted a proposed amendment to the Texas Constitution to be submitted to the people which reads: "Every resident of Texas shall have access to adequate, comprehensive health care as provided by law."

WASHINGTON: Sen Edward M. Kennedy (D-Mass) has introduced two proposals to continue federal assistance in the area of medical education. They are S 3585, the Health Professions Educational Assistance Act of 1974, and S 3586, the Nurse Training Act of 1974. The existing authorities are scheduled to expire June 30. Under S 3585, virtually all medical school graduates would be obligated to two years of service in manpower shortage areas. It would further require periodic relicensure of physicians and would introduce nationwide licensure standards. A national examination would be prepared and relicensure would be required every six years. Students receiving federal assistance during their education would be required to serve in shortage areas, and professional schools would incur reduced federal support for every student who refused to serve for the two year period. With respect to the allocation of medical specialties, legisla-

tion would require the Secretary of Health, Education and Welfare to certify all residency programs. Senator Kennedy suggested that this system would direct more physicians into primary care fields as opposed to other specialties with adequate or excessive manpower. Capitation grants to schools of health professions, including schools of public health would be continued. No school would be eligible for these grants unless all enrollees agreed to serve in the National Health Service Corps or in a shortage area. In addition, schools of medicine and osteopathy would be required to train "physician extenders." Grants would be provided to medical schools for the training of American citizens transferring from foreign medical schools. Such funds would be directed toward identifying educational deficiencies of such students and preparing them for licensure examinations.

WASHINGTON: The House Committee on Wage and Means is considering HR 1040 which would modify the Internal Revenue Code. Among the amendments tentatively agreed to by the Committee are four which relate to health care: 1) A deletion of the present provision which allows an individual to deduct one-half of his contributions for health insurance up to a maximum of $150. 2) A change in the present law which allows deductions for medical expenses above 3% of the family's adjusted gross income to allow deductions only for expenses above 5% of the family's income. The amendment would also delete present provisions which allow deductions for drug expenses above 1% of adjusted gross income. 3) A deletion of provisions which allow for the deduction of the cost of overseas business or educational trips. 4) A limitation on deductions for professional dues, membership, and the purchase of professional publications.

WASHINGTON: The Senate Subcommittee on Health has recently held hearings relating to S 3441, regarding the Drug Utilization Improvement Act and the Omnibus Drugs Amendments S 966. Dr. James H. Sammons, executive vice president-designate of the American Medical Association, stated that the AMA favored appropriate drug coding and labeling, and approved those provisions in the pending bills. However, the AMA disapproved of the transforming of the Food and Drug Administration into a research organization that would judge its own work and opposed the creation of a federal formulary since there is no single "drug of choice" for any disease that can be tolerated by all patients or be effective in all patients.

WASHINGTON: The Senate and House have voted to extend the National Labor Relations Act coverage to more than 1.4 million employees of private non-profit hospitals and to establish new collective bargaining and strike notification procedures for employees in all health care institutions. Additionally, the bill redefines health care institutions so as to include hospitals, nursing homes, health maintenance organizations, extended care facilities, health and medical clinics, and other institutions caring for the sick and the aged (S 3203).

WASHINGTON: The June 5 *Federal Register* proposed regulations under which HEW would suspend or terminate Medicare payments to a provider found to have abused the program. Also in that issue are proposed rules for Medicaid contracts with health maintenance organizations.

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Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.

INDICATIONS: *Therapeutically,* used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

PRECAUTION: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

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Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q.s. In tubes of 1 oz. and ½ oz. and $\frac{1}{32}$ oz. (approx.) foil packets.

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acute gonorrhea

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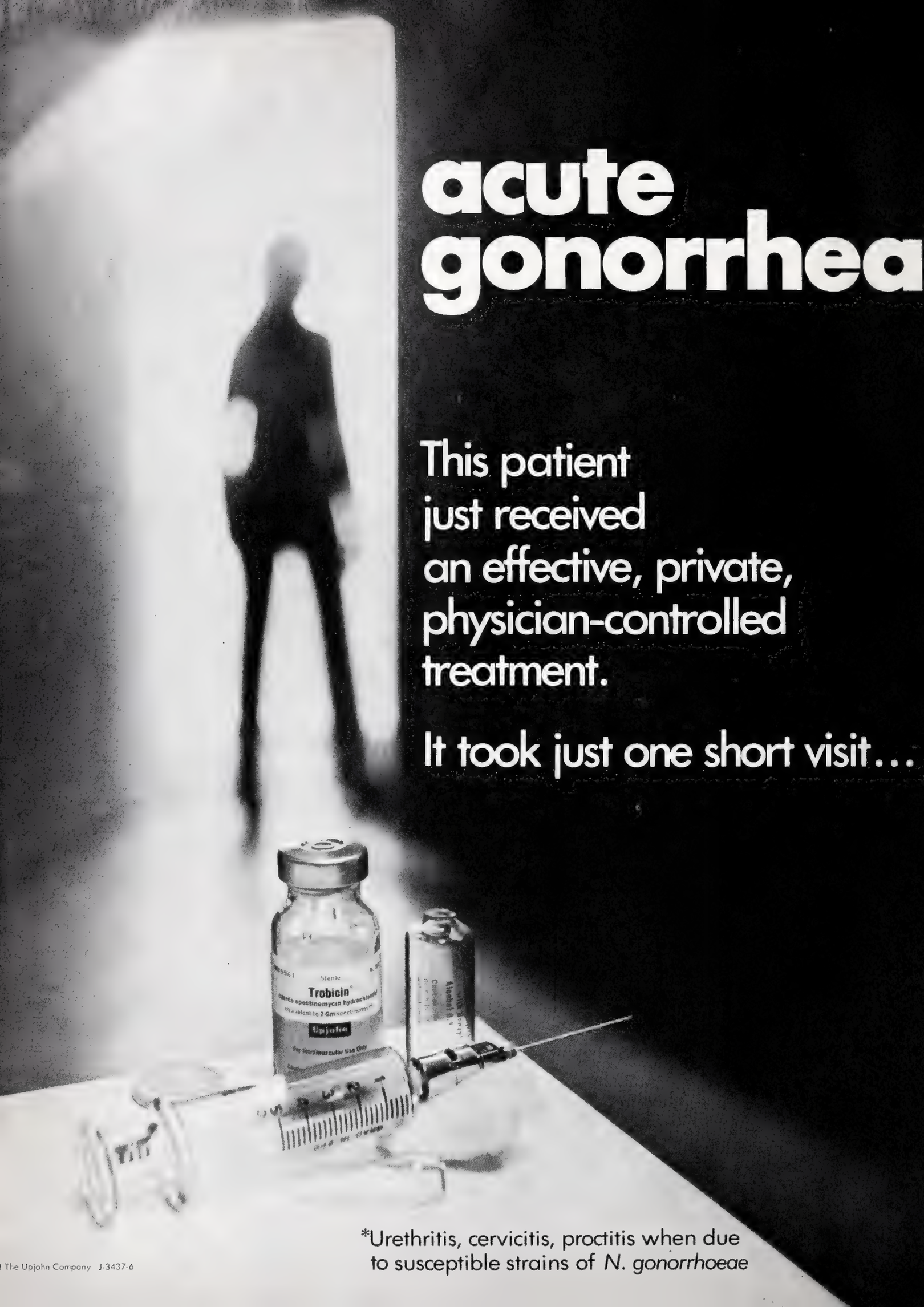

*Urethritis, cervicitis, proctitis when due to susceptible strains of *N. gonorrhoeae*

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Trobicin—The advantage of injectable therapy.
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Trobicin—Indication and dosage.
Spectinomycin is indicated only for use in acute urethritis and proctitis in the male and acute cervicitis and/or proctitis in the female when due to susceptible strains of *N. gonorrhoeae*. The usual dosage for Trobicin in adult males is 2 grams intramuscularly†; 4 grams intramuscularly in females.

Trobicin—Not effective for syphilis.
Trobicin is not effective for any stage of syphilis. Trobicin may mask or delay the symptoms of incubating syphilis. If concurrent syphilis is suspected, follow the patient serologically for at least 3 months. Patients with syphilis should receive adequate specific anti-syphilitic therapy with an appropriate antibiotic.
Trobicin is contraindicated in patients previously found hypersensitive to it.

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n vials containing 5 ml when reconstituted diluent.
n vials containing 10 ml when reconstituted diluent.
aminocyclitol antibiotic active *in vitro* against strains of *Neisseria gonorrhoeae* (MIC 7.5 0 mcg/ml). Definitive *in vitro* studies have vn no cross resistance of *N. gonorrhoeae* veen spectinomycin and penicillin.

ications: Acute gonorrheal urethritis proctitis in the male and acute gonorrheal icitis and proctitis in the female when due usceptible strains of *N. gonorrhoeae*.

ntraindications: Contraindicated in pa-ts previously found hypersensitive to spec-mycin.

arnings: Not indicated for the treatment of hilis. Antibiotics used to treat gonorrhea y mask or delay the symptoms of incubating hilis. Patients should be carefully examined d monthly serological follow-up for at least nonths should be instituted if the diagnosis of syphilis is suspected.
Safety for use in infants, children and pregnant women has not been established.

Precautions: The usual precautions should be observed with atopic individuals.
Clinical effectiveness should be monitored to detect evidence of development of resistance by *N. gonorrhoeae*.

Adverse reactions: The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.
During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single- and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

Dosage and administration: Keep at 25° C and use within 24 hours after reconstitution with diluent.

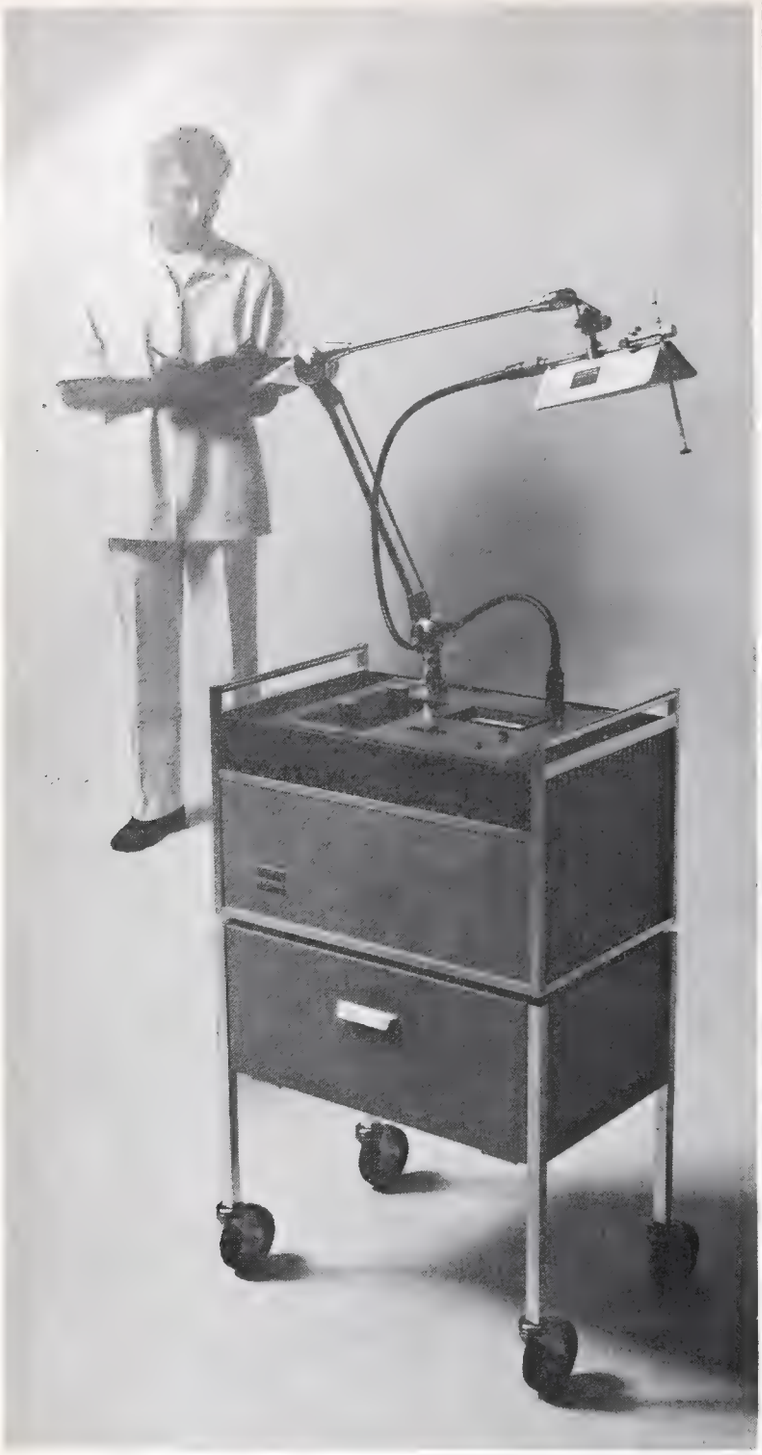
Male—Inject 5 ml intramuscularly for a 2 gram dose. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.

Female—Inject 10 ml intramuscularly for a 4 gram dose.

How supplied: *Vials, 2 and 4 grams—with ampoule of Bacteriostatic Water for Injection with Benzyl Alcohol 0.9% w/v.* Reconstitution yields 5 and 10 ml respectively with a concentration of 400 mg spectinomycin per ml (as the hydrochloride). For intramuscular use only.
Susceptibility Powder—for testing *in vitro* susceptibility of *N. gonorrhoeae*.
Caution: Federal law prohibits dispensing without prescription.
For additional product information see your Upjohn representative or consult the package insert.

Upjohn MED B-5-S (MBR-1)
The Upjohn Company, Kalamazoo, Michigan 49001

for patients with gonorrheal proctitis and for patients in geographic areas where antibiotic esistance is known to be prevalent, initial treatment with 4 grams is preferred.



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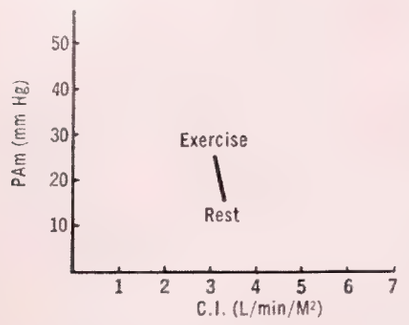
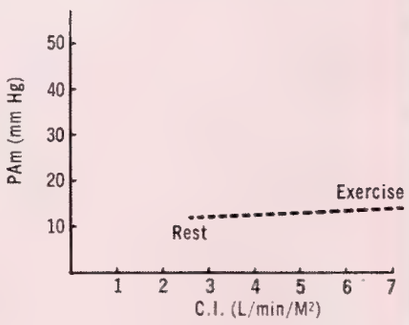
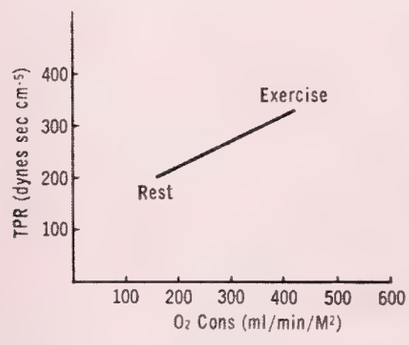
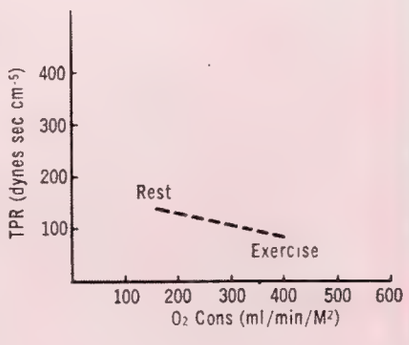
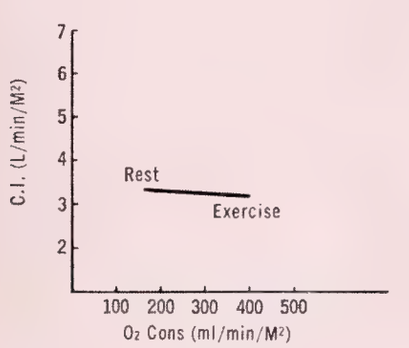
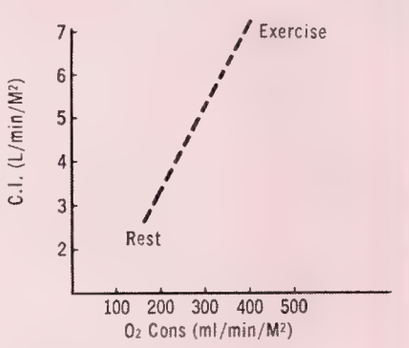
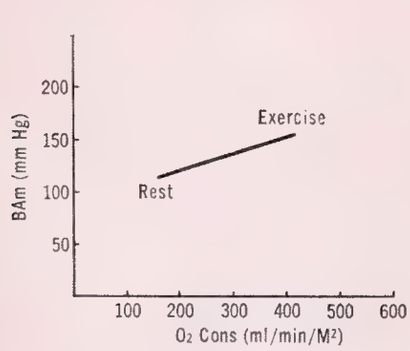
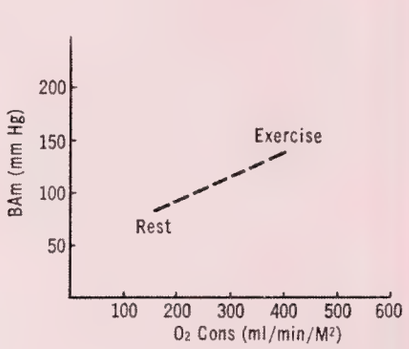
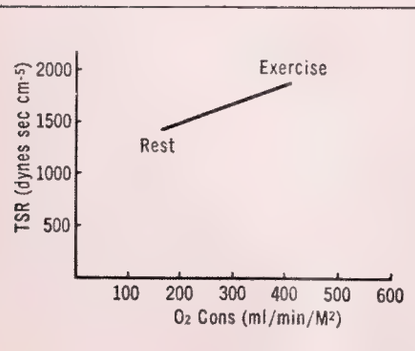
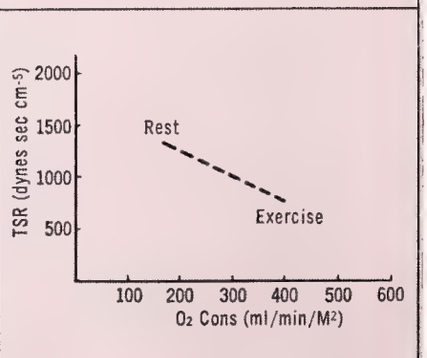
	PULMONARY ARTERY (MEAN PRESSURE)	
	TOTAL PULMONARY RESISTANCE	
	CARDIAC INDEX	
	BRACHIAL ARTERY (MEAN PRESSURE)	
	TOTAL SYSTEMIC RESISTANCE	

IN ANGINA PECTORIS*

- to abort or terminate acute anginal attacks
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ISORDIL® SUBLINGUAL
(ISOSORBIDE DINITRATE)

SUBLINGUAL TABLETS: 2.5 mg. and 5 mg.

***Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:
"Probably" effective: When taken by the sublingual route, Isordil Sublingual is indicated for the treatment of acute anginal attacks and for prophylaxis in situations likely to provoke such attacks.
Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.

Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

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Adapted from: Kasparian H, Najmi M, Likoff W: Laboratory Evaluation of Coronary Artery Disease. Scientific Exhibit, AMA Convention, Chicago, Ill, June 1966.

CONTINUING EDUCATION COURSES

JULY

Ophthalmology
Title: Ophthalmology for Family Physicians
Sponsors: Texas Society for the Prevention of Blindness; UT Health Science Center at Houston, Medical School Program in Ophthalmology
Location: North and South Auditorium, Hermann Hospital, Houston
Date: July 20, 1974
Fee: $10
Credit: 6 prescribed hours AAFP
Contact: Joanne Allen, Program Director, Texas Society for the Prevention of Blindness, 3617 Fannin, Houston 77004

AUGUST

Dermatology
Title: Dermal Pathology
Sponsors: UT Health Science Center at Houston
Location: Shamrock Hilton Hotel, Houston
Date: Aug 19-23, 1974
Fee: $200
Designed for: Pathologists and Dermatologists
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, PO Box 20367, Houston 77025

Medical Electronics
Title: Clinical Applications of Medical Electronics
Sponsors: Texas Tech University School of Medicine; Texas Tech University College of Engineering, Lubbock
Location: Texas Tech University School of Medicine, Lubbock
Date: Aug 2-4, 1974
Contact: Dr. Orene W Peddicord, Coordinator, Continuing Medical Education, Texas Tech University School of Medicine, PO Box 4569, Lubbock 79409

Pediatrics
Title: Psychological Assessment of Children
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Aug 3, 1974
Fee: $40
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Designed for: Pediatricians
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Research
Title: Current Trends in Clinical Research Technique
Sponsors: UT Health Science Center at Houston; UT System Cancer Center MD Anderson Hospital and Tumor Institute Houston
Location: M D Anderson Hospital and Tumor Institute, Houston
Date: Aug 9-10, 1974
Contact: Office of the Director, UT Health Science Center at Houston, Division of Continuing Education, PO Box 20367, Houston 77025

SEPTEMBER

Gynecology
Title: The Great Debates in Gynecological Endocrinology and Infertility
Sponsors: Dept of Obstetrics and Gynecology, Baylor College of Medicine, Houston
Location: Baylor College of Medicine, Houston
Date: Sept 20-21, 1974
Guest Speakers: Dr. Robert W Kistner, Dr. Nichols Vorys, Dr. Michael E Yannone, Dr. Joseph W Goldzieher, Dr. Richard P Dickey, Dr. Rudi Ansbacher, and Dr. George T Schneider
Fee: $50
Contact: Dr. Veasy C Buttram, Jr, Dept of Obstetrics and Gynecology, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Internal Medicine
Title: Advanced EKG Course
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Sept 13-14, 1974
Fee: $75
Credit: 10 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Designed for: Internists
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Neurosurgery
Title: Deciding on Neurosurgery
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Sept 20-21, 1974
Fee: $65
Credit: 10 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Obstetrics and Gynecology
Title: Prostaglandins
Sponsors: UT Health Science Center at Houston; Baylor College of Medicine, Houston
Location:
Date: Sept 19, 1974
Contact: Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

Psychiatry
Title: Helen Scott Saulsbury Lecture in Psychiatry—"Children and Child Rearing in America Today"
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Sept 27, 1974
Guest Speaker: Dr. Benjamin Spock
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

Surgery
Title: G V Brindley Lecture in Surgery
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Sept 3, 1974
Guest Speaker: Dr. William C Cantey, University of South Carolina
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

OCTOBER

Internal Medicine
Title: Medical Intensive Care Course #2
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Oct 10-Dec 13, 1974 (Each Thursday)
Fee: $150
Credit: 90 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Medicine and Surgery
Title: Annual Conference in Medicine and Surgery—"The Thyroid"
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Oct 19, 1974
Guest Speaker: Dr. George Crile, Cleveland, Ohio
Fee: $35
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

Obstetrics and Gynecology
Title: Recent Advances in Obstetrics and Gynecology
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Oct 25-26, 1974
Fee: $35
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

Ophthalmology and Otolaryngology
Title: Ophthalmology and Otolaryngology for Primary Care Physicians
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Oct 18-19, 1974
Fee: $85
Credit: 12 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Psychiatry
Title: Folk Medicine in Mexico and Southwestern United States
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Oct 3, 1974
Fee: $15
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Urology
Title: Postgraduate Seminar in Urology
Sponsors: South Central Section of American Urological Association
Location: UT Health Science Center at Dallas
Date: Oct 25-27, 1974
Fee: Approx $200
Contact: Dr. Paul C Peters, Chairman, Urology Division, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

A Comprehensive Therapeutic Program for the G.I. patient

Enarax® (oxyphencyclimine HCl/hydroxyzine HCl) Tablets, as adjunctive therapy, can help relieve a wide range of gastrointestinal disorders—and their accompanying anxiety.* Without cooperation of the patient, however, no medicinal regimen can succeed entirely... an understanding of the condition, the factors involved in its development, and the proper approach to self-care are often basic to successful therapy.

To help save some of your valuable time in providing this background information, this specially designed G.I. Patient Relief Kit is available on request—a valuable addition to your overall therapeutic program.

In addition to a complimentary introductory prescription for **Enarax** Tablets, this handsome kit contains the information and appropriate stimuli to start the patient on a program of proper self-care:

Patient Information Booklet, "You and Your Digestive System"—easy-to-swallow advice on how to take care of the gastrointestinal tract, including diet information.

Sanka® **brand decaffeinated coffee** sample packets to provide an alternative to regular coffee with caffeine for the patient who insists on drinking coffee.

Gelusil® **Liquid** to help relieve heartburn, dyspepsia, gas, and flatulence between meals.

Money-saving coupon for future purchase.

You can obtain a quantity of these kits packaged for easy office storage by filling out the attached Prepaid Business Reply Card.

ROERIG Pfizer

A division of Pfizer Pharmaceuticals
New York, New York 10017

*Based on a review of this drug by the National Academy of Sciences—National Research Council, F.D.A. has classified this indication as "possibly" effective.

Please see following page for prescribing information, including adverse reactions, contraindications and warnings.

To help control G.I. distress*/calm psychic tension*

Enarax® tablets

(oxyphencyclimine HCl/hydroxyzine HCl)

- Combination provides for effective 12-hours antispasmodic/anticholinergic action of oxyphencyclimine with the calming action of Atarax® (hydroxyzine HCl).
- As adjunctive therapy, helps relieve a wide range of gastrointestinal disorders, and their accompanying anxiety—simultaneously. However, it should be used with caution in patients with ulcerative colitis.
- Avoids the confusion and expense of two medication schedules.
- Convenient b.i.d. dosage.
- Individualized therapy—Enarax® 5 (oxyphencyclimine HCl 5 mg./hydroxyzine HCl 25 mg.). Enarax® 10 (oxyphencyclimine HCl 10 mg./hydroxyzine HCl 25 mg.).
- Usually well tolerated; drowsiness or blurred vision may occur.

SEE REVERSE FOR FREE OFFER.

PRESCRIBING INFORMATION

Composition

Each Enarax 5 tablet contains:

oxyphencyclimine HCl	5 mg.
hydroxyzine HCl N.F. (Atarax)®	25 mg.

Each Enarax 10 tablet contains:

oxyphencyclimine HCl	10 mg.
hydroxyzine HCl N.F. (Atarax)®	25 mg.

Description. Enarax is a combination of oxyphencyclimine HCl and hydroxyzine HCl. Oxyphencyclimine HCl is a crystalline substance characterized by the chemical formula: (1-methyl-1,4,5,6 tetrahydro-2-pyrimidyl-methyl alpha-cyclohexyl-alpha-phenylglycolate hydrochloride). It is soluble and stable in aqueous solutions.

Hydroxyzine HCl is designated chemically as 1-(p-chlorobenzhydryl)-4-[2-(2-hydroxyethoxy)-ethyl] piperazine dihydrochloride.

Actions. Oxyphencyclimine HCl provides long acting suppression of gastric secretion through its anticholinergic action. The mechanism of this action is the inhibition of acetylcholine at postganglionic cholinergic sites in structures innervated by postganglionic parasympathetic nerves and on smooth muscle not so innervated but responsive to acetylcholine.

Hydroxyzine HCl, marketed under the trade name, Atarax®, has been shown clinically to be an effective anti-anxiety agent. It induces a calming effect in anxious, tense individuals without impairing mental alertness. It is not a cortical depressant, but its action may be due to a suppression of activity in certain key regions of the subcortical area of the central nervous system.

***Indications.** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Possibly Effective: As adjunctive therapy in peptic ulcer; irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, functional gastrointestinal disorders); functional diarrhea; drug induced diarrhea; ulcerative colitis, and urinary bladder spasm and ureteral spasm (i.e. smooth muscle spasm).

Final classification of these less than effective indications requires further investigation.

Contraindications. Because of its anticholinergic activity, Enarax is contraindicated in the presence of glaucoma, obstructive uropathy (i.e. bladder neck obstruction due to prostatic hypertrophy), obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis, etc.); paralytic ileus; intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis.

Warnings. Hydroxyzine, when administered to the pregnant mouse, rat, and rabbit induced fetal abnormalities in the rat at doses substantially above the human therapeutic range. Clinical data in human beings are inadequate to establish safety in early pregnancy. Until such data are available, hydroxyzine-containing drugs are not advised in early pregnancy.

In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heatstroke due to decreased sweating).

Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful.

Enarax may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery, or perform hazardous work while taking this drug.

Precautions. Anticholinergics should be used with caution in patients with:

autonomic neuropathy,

hepatic or renal disease,

ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon.

hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension and nonobstructing prostatic hypertrophy; hiatal hernia associated with reflux esophagitis, since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis).

The use of this drug in the presence of complication of biliary tract disease should not be relied upon.

Tachycardia should be thoroughly investigated before giving anticholinergic (atropine-like) drugs since they may increase the heart rate.

With overdosage, a curare-like action may occur.

Adverse Reactions. As with other anticholinergics, oxyphencyclimine HCl produces certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these.

Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis, dilatation of the pupil; cycloplegia, increased ocular tension; loss of taste; headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestation; some degree of mental confusion and/or excitement especially in elderly persons.

Decreased sweating is another adverse reaction that may occur. It should be noted that adrenergic innervation of the eccrine sweat glands on the palms and soles make complete control of sweating impossible. An end point of complete anhidrosis cannot occur because large doses of drug would be required, and this would produce severe side effects from parasympathetic paralysis.

Side effects which occasionally occur with hydroxyzine HCl (Atarax)® are drowsiness, xerostomia, and, at extremely high doses, involuntary motor activity, all of which may be controlled by reduction of the dosage or discontinuation of the medication.

Dosage and Administration. The recommended adult dose is usually one Enarax 5 or one Enarax 10 tablet two times a day or three times a day, depending on individual response. Proper diet and antacids should be used where indicated as concomitant therapy. The safe use of Enarax in children has not been established; therefore, the drug should not be used in children.

Drug Interactions. The potentiating action of hydroxyzine must be considered when the drug is used in combination with central nervous system depressants.

How Supplied. Enarax 5 is available as white scored tablets in bottles of 60. Enarax 10 is available as black and white scored tablets in bottles of 60.

ROERIG Pfizer

A division of Pfizer Pharmaceuticals
New York, New York 10017

COMING MEETINGS

TEXAS PEDIATRIC SOCIETY

The 52nd annual meeting of the Texas Pediatric Society will combine with business meetings of the Texas Chapter of the American Academy of Pediatrics and the Texas Society of Pediatric Surgeons Sept 19-21 at the Rodeway Inn in El Paso. Scientific program topics include apnea at birth, regionalization of perinatal health care, long and short term effects of maternal-infant separation, congenital postural deformities, advances in infant nutrition and others. The meeting will be followed by a post-meeting seminar tour to Mazatlan with Dr. Sydney Gellis as a daily lecturer while in Mexico.

Contact: Dr. Laurance N. Nickey, Vice President, Texas Pediatric Society, 1515 N Oregon St, El Paso 79902.

TEXAS PHARMACEUTICAL ASSOCIATION

The Astroworld Hotel in Houston will be the headquarters for the 95th Annual Meeting of the Texas Pharmaceutical Association July 21-24. Keynote speaker for the meeting is W Philip Gramm, PhD, of Texas A & M University. Three workshops will be presented during the meeting on the subject of the pharmacy preceptor program in Texas; drugs used in the treatment of cardiac patients; and use of financial analysis and budget preparation for a community pharmacy.

Contact: Luther R Parker, RPh, PO Box 4487, Austin 78701, Exec Dir.

ROCKY MOUNTAIN RADIOLOGICAL SOCIETY

The 36th Midsummer Radiological Conference of the Rocky Mountain Radiological Society will be held Aug 22-24 at the Brown Palace Hotel, Denver. A refresher course on chest diseases will be sponsored by the Radiological Society of North America, and other topics on the program include isotopes in cardiology; the abdomen: an anatomic approach; approach to arthritis; pitfalls in bone scanning; skeletal manifestations of the lymphomas and leukemias; and diagnostic criteria in abdominal echography. Registration fee for nonmembers if $50.

Contact: Dr. Lorenz R Wurtzebach, Rocky Mountain Radiological Society, 4200 E Ninth Avenue, Denver 80220, Sec-Treas.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, will present its 17th Annual Ruidoso Summer Clinic July 15-18 at the Chaparral Motel, Ruidoso, NM. Contact: Bob Reid, PO Box 456, Sunland Park, NM 88063, Exec Sec.

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY's 28th annual meeting will be held July 25-27 at the Seattle Center, Seattle. The meeting will be preceded by a three-day course in clinical electroencephalography, and the American Society of Electroencephalographic Technologists will meet at the Seattle Center on July 24-25 to conduct courses in both basic and advanced electroencephalographic technology. Contact: Mrs. Margaret H Henry, American EEG Society, 4137 Erie St, Willoughby, Ohio 44094, Exec Sec.

AMERICAN MEDICAL ASSOCIATION's Fourth Hemisphere Nutrition Conference will be held Aug 19-22 in Bal Harbour, Fla. The economics of food production in a world forced to establish priorities for limited supplies of energy will be a major theme of the conference. It will also feature continuing education sessions for nutritionists to provide an update of information for those who deal with malnutrition as it relates to disease. Contact: Department of Foods and Nutrition, American Medical Association, 535 N Dearborn St, Chicago 60610.

ASPEN MUSHROOM CONFERENCE, sponsored by the Beth Israel Hospital, Denver, and the Colorado Mountain College, Glenwood Springs, Colo, is designed for physicians, scientists, and amateur mycologists interested in the identification and toxic properties of mushrooms. It will be held at the Inns of Court, Snowmass-at-Aspen, Colo, Aug 26-30. Didactic sessions and refresher courses on mushroom identification will be held in the early mornings and late afternoons at the novice and advanced student levels. Group discussions on advances in the diagnosis and treatment of mushroom poisoning will be offered to physicians and others interested in the subject. Experienced leaders will conduct daily forays into the surrounding mountains to collect edible and poisonous species and study their field characteristics. Contact: Aspen Mushroom Conference, Beth Israel Hospital, W 17th Ave & Lowell Blvd, Denver 80204.

For other courses and symposiums, see Continuing Education Courses, pp 29-30.

Calendar of Listings

■ Denotes Texas Meetings

JULY

INTERNATIONAL ASSOCIATION FOR CHILD PSYCHIATRY AND ALLIED PROFESSIONS, Philadelphia, July 28-Aug 2, 1974. Dr. Herman D Staples, 24 Green Valley Rd, Wallingford, Pa 19086, Sec-Gen.

NATIONAL MEDICAL ASSOCIATION, New Orleans, July 28-Aug 1, 1974. Robert D Watkins, 2109 E St NW, Washington, DC 20037, V-Pres.

RADIATION RESEARCH SOCIETY, Seattle, July 14-20, 1974. R J Burk, Jr, 4211 39th St NW, Washington, DC 20016, Exec Dir.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, July 12-18, 1974. F C Schmidt, 1809 E 18th, Denver 80218, Exec Off.

AUGUST

■ AMERICAN CANCER SOCIETY, TEXAS DIVISION, Board of Directors, Dallas, Aug 7-8, 1974. Curt W Reimann, PO Box 9863, Austin 78766, Exec VP.

AMERICAN HOSPITAL ASSOCIATION, Chicago, Aug 12-15, 1974. John Alexander McMahon, 840 N Lake Shore Dr, Chicago 60611, Pres.

NATIONAL MEDICAL AND DENTAL ASSOCIATION OF AMERICA, St Augustine, Fla, Aug 4-8, 1974. Dr. Henry Polchlopek, 434 Springfield St, Chicopee, Maine 01013, Sec.

ROCKY MOUNTAIN RADIOLOGICAL SOCIETY, Denver, Aug 22-24, 1974. Dr. Lorenz R Wurtzebach, 4200 E Ninth Ave, Denver 80220, Sec-Treas.

SEPTEMBER

■ AMERICAN ACADEMY OF PEDIATRICS, TEXAS CHAPTER, El Paso, Sept 20, 1974. Dr. Paul Meyer, 3121 Procter, Port Arthur, Tex 77640, Sec.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, Denver, Sept 23-29, 1974. Dene R Murray, One E Wacker Dr, Suite 1510, Chicago 60601, Exec Dir.

AMERICAN ASSOCIATION OF MEDICAL CLINICS, Washington, DC, Sept 4-8, 1974. James B Cobb, PO Box 949, Alexandria, Va 22313, Exec Off.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Hot Springs, Ark, Sept 4-7, 1974. Dr. J Donald Woodruff, Johns Hopkins Hospital, Baltimore 21205, Sec.

AMERICAN ROENTGEN RAY SOCIETY, San Francisco, Sept 24-27, 1974. Dr. Ted F Leigh, Emory University Clinic, Atlanta, Ga 30322, Exec Sec.

■ BLACKFORD MEMORIAL LECTURES, Denison, Sept 7, 1974. Dr. John D Gleckler, 211 N Fannin, Denison 76020, Chrmn.

FLYING PHYSICIANS ASSOCIATION, Biloxi, Miss, Sept 22-27, 1974. Albert Carriere, 801 Green Bay Rd, Lake Bluff, Ill 60044, Business Counsel.

■ TEXAS MEDICAL ASSOCIATION, Austin, Sept 20-22, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

WORLD MEDICAL ASSOCIATION, Stockholm, Sweden, Sept 1-8, 1974. Ms. Margaret L Natwick, World Medical Association, 10 Columbus Circle, New York 10019, Exec Sec.

OCTOBER

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Los Angeles, Oct 14-17, 1974. Roger Tusken, American Academy of Family Physicians, 1740 W 92nd St, Kansas City, Mo 64112, Exec Dir.

■ AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Dallas, Oct 6-10, 1974. Dr. C M Kos, 15 Second St SW, Rochester, Minn 55901, Sec-Treas.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, Cincinnati, Oct 15-20, 1974. J J Garvey, 2317 W Jefferson St, Suite 208, Joliet, Ill 60435, Exec Sec.

■ AMERICAN ASSOCIATION OF OPHTHALMOLOGY, Dallas, Oct 5-10, 1974. Lawrence A Zupan, 1100 17th St NW, Washington, DC, 20036.

AMERICAN CANCER SOCIETY, New York City, Oct 14-18, 1974. Lane W Adams, 219 E 42nd St, New York 10017, Exec VPres.

AMERICAN COLLEGE OF GASTROENTEROLOGY, Bal Harbour, Fla, Oct 21-26, 1974. Mr. Daniel Weiss, 299 Broadway, New York 10007, Exec Dir.

AMERICAN COLLEGE OF SURGEONS, Miami Beach, Oct 21-25, 1974. Dr. C Rollins Hanlon, American College of Surgeons, 55 E Erie St, Chicago 60611, Dir.

AMERICAN DIETETIC ASSOCIATION, Philadelphia, Oct 7-11, 1974. Robert M Crum, JD, American Dietetic Association, 620 N Michigan Ave, Chicago 60611, Exec Dir.

AMERICAN FRACTURE ASSOCIATION, Atlanta, Oct 20-23, 1974. Dr. H W Wellmerling, 600 Livingston Bldg, Bloomington, Ill 61701, General Sec.

AMERICAN MEDICAL RECORD ASSOCIATION, San Francisco, Oct 13-17, 1974. Mrs. Mary Waterstraat, 815 N Michigan Ave, Suite 1850, Chicago 60611, Exec Sec.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, Washington, DC, Oct 12-16, 1974. John W Andes, 515 Busse Hwy, Park Ridge, Ill 60068, Exec Sec.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Washington, DC, Oct 4-11, 1974. Dr. George F Stevenson, 2100 W Harrison, Chicago 60612.

■ AMERICAN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGEONS, Houston, Oct 27-Nov 1, 1974. Dallas Whaley, 29 E Madison, Chicago, Ill 60602, Exec VPres.

INTERNATIONAL CANCER CONGRESS, Florence, **Italy, Oct 20-26, 1974. Dr. Murray M Copeland, M D** Anderson Hospital and Tumor Institute, Houston 77025.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct 12, 1974. Carlie Umphres, PO Box 3276, Amarillo 79106, Exec Sec.

NOVEMBER

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, San Francisco, Nov 16-19, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN ASSOCIATION OF BLOOD BANKS, Anaheim, Nov 9-14, 1974. Ms. Lois James, 1828 L St NW, Washington, DC 20036, Exec Sec.

■ AMERICAN ASSOCIATION FOR RESPIRATORY THERAPY, Dallas, Nov 22-27, 1974. Winfield Singletary, 7411 Hines Pl, Dallas 75235, Exec Off.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, Washington, DC, Nov 4-6, 1974. Arthur E Auer, 241 E Saginaw, East Lansing, Mich 48823, Exec Dir.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, San Francisco, Nov 20-22, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN DENTAL ASSOCIATION, Washington, DC, Nov 10-14, 1974. C Gordon Watson, 211 E Chicago Ave, Chicago 60611, Exec Dir.

■ **AMERICAN HEART ASSOCIATION, Dallas, Nov 18-23, 1974. William W Moore, 44 E 23rd St, New York 10010, Exec Off.**

AMERICAN MEDICAL ASSOCIATION, Honolulu, Nov 30-Dec 4, 1975. American Medical Association, 535 N Dearborn St, Chicago 60610.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, New Orleans, Nov 5-10, 1974. F D Nowlin, 800 Washington Ave SE, Minneapolis 55414, Exec Sec.

AMERICAN SOCIETY OF CYTOLOGY, New York, Nov 6-9, 1974. Dr. Warren R Lang, Health Sciences Center, 130 S 9th St, Suite 1006, Philadelphia 19105, Sec-treas.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, Chicago, Nov 10-14, 1974. Dr. John A D Cooper, One Dupont Circle, NW, Washington, DC 20036, Pres.

INTERNATIONAL COLLEGE OF SURGEONS, Portland, Ore, Nov, 1974. Dr. Virgil T DeVault, 1516 Lake Shore Dr, Chicago 60601, Exec Off.

MEDICAL SOCIETY OF THE US AND MEXICO, Guadalajara, Mex, Nov 6-10, 1974. Mrs. Virginia E Bryant, 333 W Thomas, No 207, Phoenix, Ariz 85013, Exec Sec.

SOUTHERN MEDICAL ASSOCIATION, Atlanta, Nov 17-20, 1974. Robert F Butts, 2601 Highland Ave, Birmingham 35210, Exec Dir.

■ **TEXAS ACADEMY OF FAMILY PHYSICIANS, Galveston, Nov 9-13, 1974. Donald C Jackson, 1905 N Lamar Blvd, Austin 78705, Exec Dir.**

■ **TEXAS MEDICAL ASSOCIATION, Austin, Nov 2-3, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.**

■ TEXAS NURSING HOME ASSOCIATION, Houston, Nov 20-22, 1974. Sidney D Rich, 6225 Highway 290E, Austin 78723, Exec VPres.

■ TEXAS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Houston, Nov 1-2, 1974. Dr. Bert A DeBord, Scott and White Clinic, Temple 76501, Sec.

DECEMBER

AMERICAN ACADEMY OF PSYCHOANALYSIS, Kingston, Jamaica, Dec 5-8, 1974. Dr. Joseph Barnett, 8 E 77th St, New York 11029.

AMERICAN MEDICAL ASSOCIATION, Portland, Ore, Dec 1-4, 1974. Dr. Ernest B Howard, 535 N Dearborn St, Chicago 60610, Exec VPres.

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec 4-7, 1974. Mrs. Betty Suor, 1116 S 5th, Tacoma, Wash 98405, Exec Sec.

■ AMERICAN MEDICAL WOMEN'S ASSOCIATION, Houston, Dec 1-3, 1974. Dr. Claudine Moss Gay, 403 E Capitol St, Washington, DC 20003, VPres.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Dec 1-6, 1974. Miss Adele Swenson, 713 E Genesee St, Syracuse, NY 13210, Exec Dir.

SOUTHERN SURGICAL ASSOCIATION, Boca Raton, Fla, Dec 9-11, 1974. Dr. W Dean Warren, Emory University, Atlanta 30322, Sec.

■ TEXAS ACADEMY OF INTERNAL MEDICINE, Galveston, Dec 5, 1974. Dr. Tom W Duke, PO Box 3460, Amarillo 79106, Sec.

■ TEXAS SOCIETY OF INTERNAL MEDICINE, Galveston, Dec, 1974. Dr. Willis A Seyffert, Jr, 6006 N Mesa, #100, El Paso 79912, Sec-treas.

JANUARY

■ **TEXAS MEDICAL ASSOCIATION, Austin, Jan 17-19, 1975. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Dir.**

■ TEXAS SOCIETY OF PATHOLOGISTS, El Paso, Jan 24-26, 1975. Dr. John A Webb, 704 Medical Towers, Houston 77025, Sec.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, San Diego, Feb 15-19, 1975. James O Kelley, 225 E Michigan St, Milwaukee 53202, Exec Off.

AMERICAN ACADEMY OF FORENSIC SCIENCES, Chicago, David A Crown, Room 3517, State Dept, Washington, DC 20520, Pres.

■ AMERICAN COLLEGE OF CARDIOLOGY, Houston, Feb 10-13, 1975. William D Nelligan, 9650 Rockville Pike, Bethesda 20014, Exec Off.

Heart counterattack.

You may feel as if you're strangling. There is severe discomfort, often excruciating pain, in the center of your chest. Perhaps it seems to radiate over into your left shoulder, even down your left arm. You are perspiring heavily, and you are undergoing sudden, intense shortness of breath. And you may be nauseated to the point of vomiting (and if you are, you may think you are suffering from indigestion). Finally, you may lose consciousness.

We've described what you call a heart attack and doctors call coronary occlusion, coronary thrombosis, or myocardial infarction. They are by no means the only kinds of heart disease, but together they account for the greatest number of deaths due to cardiovascular ailments.

Your heart attack, as described, came from a blocking of the flow of blood through the heart. Either fatty deposits accumulated in the coronary artery, or a blood clot formed in it, or the heart muscle itself became damaged.

Sometimes one or more of the symptoms may be missing. Sometimes the attack is so mild you won't quite notice it, or won't consider it worth attention. That is a danger. Your doctor can detect warning signals, or evidence of past damage, and can prescribe treatment.

Treatment. You can't treat yourself. Summon a doctor or get to a hospital immediately. Time is crucial: a quarter of deaths from heart attack occur within three hours of the beginning of the first attack. Some heart disease is reversible. Many attacks need not prove fatal, and cures both with and without surgery are becoming more and more common.

Prevention. Unless you are one of the few persons born with a cardiovascular defect, you can do much yourself to prevent the development of heart disease. Shun cholesterol: eat less saturated fat (butter, cheese, egg yolk, visible animal fat); eat more polyunsaturated fats (cook with vegetable oils; eat more poultry and fish). Keep your blood pressure down; your physician will help. Don't smoke; if you do, quit. A male cigarette smoker with high cholesterol and high blood pressure is about 10 times as likely to have a heart attack as a man with none of those risk factors. Slim down to your proper weight and stay there; and exercise regularly. Both diet and exercise should be under the direction of your physician.

Blue Cross and Blue Shield plans are helping a number of Texans pay for the cost of treating heart attacks. But, because we think of ourselves as People Helping People, we'd rather help you stay well than get well. Send for our book, Food and Fitness. And stay well and enjoy life.

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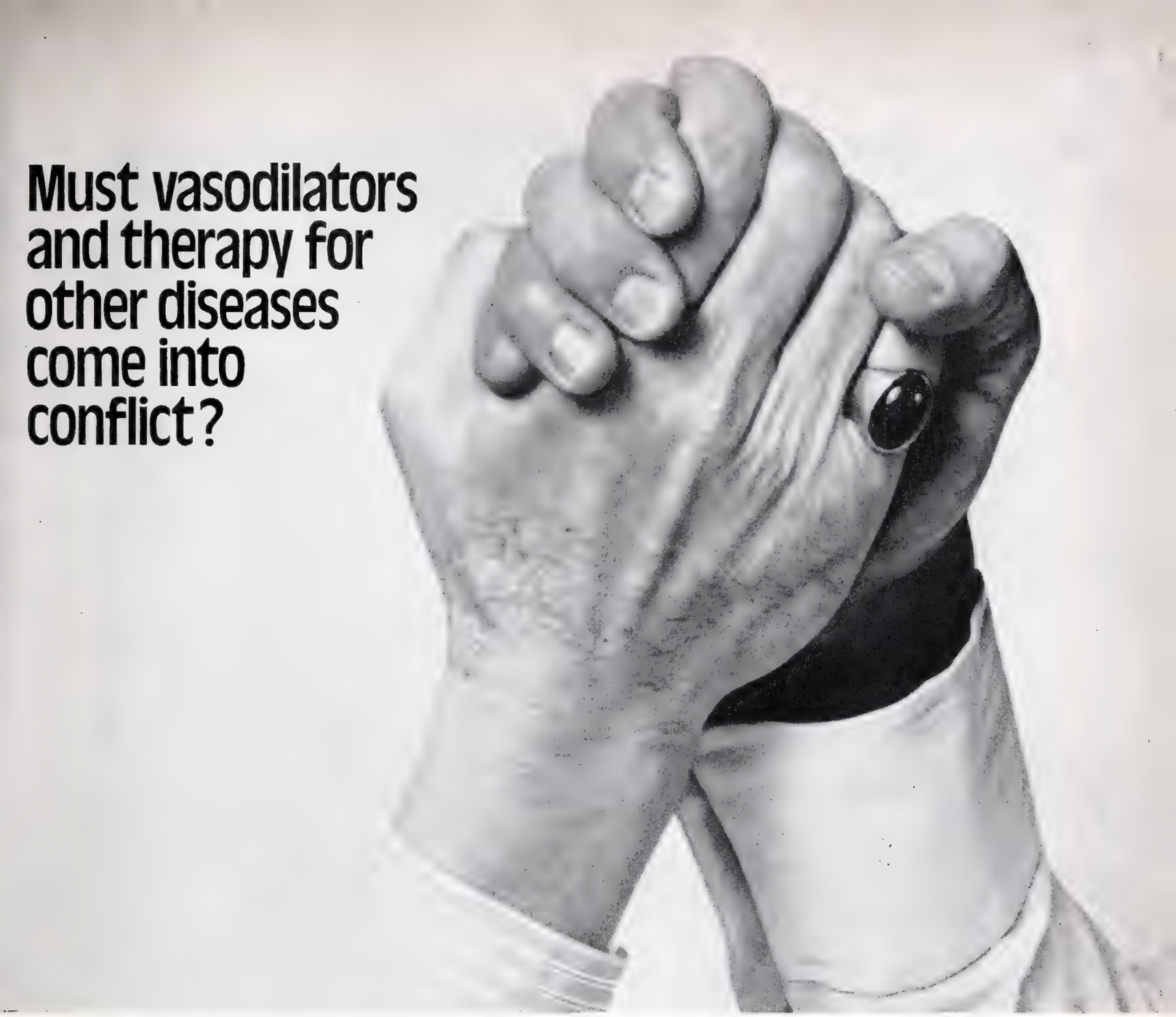

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1. Gertler, M. M., et al.: Geriatrics *25:*134-148 (May) 1970.

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Cancer of the endometrium

Hugh R. K. Barber, MD; Barry Reisman, MD; Sheldon C. Sommers, MD;
Edward A. Graber, MD

Cancer of the endometrium, now on the increase, is the second most common gynecological cancer. There are more than 11,000 new cases per year—4.3% of the cancer incidence in women. In New York State, Randall[1] reports the incidence has increased from 56 to 59/100,000, while the death rate has dropped from 24 to 17/100,000. There is no doubt that the incidence is increasing, and perhaps in the next decade cancer of the endometrium may become the most frequently encountered malignancy in the female and overtake what is presently number one, cancer of the breast. Cancer of the colon is second; and cervical cancer is third. In Regan's report, the incidence of cervical cancer is 70%, versus endometrial cancer at 30%. In many other groups, the incidences, respectively, are about 45% and 55%. Whether this is due to the fact that we are diagnosing and treating carcinomas of the cervix earlier, before they become invasive, cannot be determined at this time. There may well be an increase in endometrial carcinoma that is not related to the cervical cancer statistics. Whether this is due to the increasing age of the population, to better and earlier diagnoses, or perhaps to an unconscious bias on the part of the pathologist (who may be making diagnoses of early endometrial cancer in young patients with borderline lesions) is hard to determine.

Generally speaking, endometrial carcinoma is thought to be a relatively slow-growing tumor of low virulence. Yet the figures of Gusberg[2] at Mt. Sinai Hospital indicate a five-year survival rate of only 55.9%. Frick[3] reports an overall survival of 66.1% from Columbia Presbyterian Medical Center. In Stockholm, the 14th annual report indicates a 62.6% five-year survival rate for stages 1 and 2 only (according to the classification in the 14th annual report). Perhaps it is time that the concept of this being a relatively benign type of cancer should be reevaluated. On the other hand, early in its course, it usually can be treated successfully with relatively unsophisticated techniques, and indeed, is cured more frequently than malignant disease of any other organ except the skin. One must ask whether an increased survival rate could be achieved by reevaluating current methods of treatment and following a more rigid protocol.

One of the problems in evaluating any series of cases is how to interpret the pathological specimen. What some pathologists call adenomatous hyperplasia of the endometrium, with atypia, others may call carcinoma in situ of the endometrium or stage 0 carcinoma of the endometrium. This in itself may well weight statistics in different series. By all modern criteria, invasive carcinoma of the endometrium means invasion of the endometrium by the malignant epithelial cells. On the other hand, Dougherty and others maintain that this diagnosis is acceptable with a high grade of atypical glandular and epithelial proliferation. This problem has been noted by the physicians who formulated the FIGO classification for endometrial carcinoma in 1971. They made a point that stage 0 or carcinoma in situ, and/or histologic findings suggestive of malignancy should not be included in therapeutic statistics. Unfortunately, this has not always been carried out in reported series. A comparison of results therefore becomes difficult.

Incidence

Cancer of the endometrium is predominantly a disease of the peri- or postmeno-

pausal age groups. However, 5% of cases are in women under 40 years of age, and the disease has been found in patients as young as 17. Over 75% of cases occur after age 50, while 20% occur between the ages of 40 and 50.

No doctor working in the field of oncology should be egotistical enough to think that he can treat, for predictable cure, any given patient with invasive cancer of the endometrium. Therefore, attention must be focused on early diagnosis; to this end, a plan for isolating the high-risk group of patients who are candidates for developing endometrial cancer is discussed. Currently available knowledge makes it possible to identify clinically the high-risk group in the development of this disease. Garnet[4] suggested that abnormal pituitary function might be a prime factor etiologically. He suggested several parameters frequently associated with endometrial cancers: obesity, nulliparity, reduced glucose tolerance, hypertension, hyperestrogenism, continuous uninterrupted estrogen stimulation, menses continuing beyond the age of 50, a history of dysfunctional uterine bleeding, and a history of anovulation. One other factor should be mentioned—basically, endometrial carcinoma is a disease of the middle class—sometimes called a disease of suburbia, while cervical cancer is basically a disease of the central city. It has also been noted that there is an increased incidence of endometrial cancer in the United States, Great Britain, and Israel in the age group between 30 and 39. With a relatively high level of nutrition and perhaps some increase in cholesterol and saturated fats or some other factor we are completely unaware of, we are seeing more endometrial cancer at an earlier age. There is an interesting report by Cutler showing two definite cases and one probable case of endometrial carcinoma in women treated with stilbestrol for gonadal dysgenesis for five or more years. There are three other cases reported in the literature. Can it be that stilbestrol being fed to cattle and chickens until at least this year in the United States has something to do with our increasing level of endometrial carcinoma? Can this drug in some way be contributing to increased incidence of epithelial unrest in the uterus and perhaps even the breasts of these women? Klavan[4] reported that a combination of at least five of the following factors are required to define hyperestrogenism: early menarche, delayed onset of ovulation, cessation of ovulation later in her reproductive life, dysfunctional uterine bleeding, involuntary sterility, endometrial polyps and hyperplasia, habitual abortion, and severe cystic disease of the breasts, and other findings associated with unopposed estrogen stimulation of the endometrium. However, all of these parameters help identify *clinically* the high-risk patient, but screening methods employing cytology have been more elusive. Screening programs by cytology carried out to identify early changes in cervical abnormalities have not yielded the same results in picking up patients with early changes in the endometrium that will be at risk. The pickup rate on routine screening for the asymptomatic patient is only about 3% or less of all endometrial cancers. Negative cytology does not have the same accuracy in prognosticating that the development of cancer is highly unlikely because on cytologic evaluation the preinvasive lesions are not diagnosed with the same accuracy as is obtained in cancer of the cervix. Therefore, it is highly unlikely that screening programs directed at de-

tecting cancer of the endometrium will have a major impact on morbidity and mortality rates in the foreseeable future. The cytologist can diagnose the benign or malignant endometrium but has trouble detecting the in-between groups with adenomatous hyperplasia, dysplasia, or cancer in situ, but can do this with a high degree of accuracy if tissue is obtained for paraffin block histologic examination. In addition, endometrial hyperplasia develops into endometrial cancer in only 1.57% of patients. Also, cancer patients do not have a higher than normal estrogen titer; therefore, there must be factors other than simple prolonged estrogen stimulation at work.

Symptoms

The first symptom is abnormal vaginal bleeding. It is not only related to the menopausal patient alone but is the most common symptom in all age groups. Since endometrial cancer is rare in the third and fourth decades, dysfunctional uterine bleeding may be accepted by both the patient and physician as being a variant of normal. However, if the patient has anovulation, a prolonged history of menstrual disturbances, and evidences of pituitary disfunction, the clinical picture is compatible with being in the high-risk group for endometrial cancer. The point to emphasize is that abnormal vaginal bleeding in any group should be accorded special attention.[5]

Diagnosis

Certain pitfalls may delay early diagnosis of endometrial cancer. These are the old wives' tales that abnormal bleeding is normal at the time of the menopause. Bleeding in the postmenopausal years is still occasionally looked upon by the patient as a rejuvenation and a reprieve from the steady ravages of aging. The curettage (fractional) may be delayed because the Papanicolaou smear has been reported to be negative. The comparative accuracy of the techniques for detecting endometrial cancer are: vaginal pool sample, 50%; ectocervical cell sample, 70%; endometrial brush technique, 75%; uterine aspiration smears, 88%; intrauterine lavage, 87%; and Gravlee jet washer, 93%. Among the methods for collecting the specimen, that obtained from the vaginal pool is the least reliable. However, there has been some dispute over the jet washer, and few can achieve the results obtained by Dowling and Gravlee and So-Bosita, Lebherz and Blair.[4] Nevertheless, the combination of sampling from the vaginal pool, endocervix and an endometrial aspiration will increase to $> 90\%$ the chances of detecting an endometrial cancer. Although the endometrial aspiration technique has a high rate of accuracy in diagnosing invasive cancer or endometrium negative for cancer, it is not sensitive enough cytologically to detect the high-risk patient. While the accuracy in detecting cervical changes is on the order of 85%, it is not nearly as great for revealing endometrial changes. However, in a relatively few patients the cytologist is able to identify changes that place the patient at high-risk for the development of endometrial cancer. Cell blocks are easy for the pathologist to read, and she can identify hyperplasia, dysplasia, anaplasia, and adenomatous changes as well as cancer in situ with a high accuracy rate. Unfortunately, it is not always possible to obtain endometrial tissue without putting the patient to sleep. It is to be reemphasized that a

curettage (fractional) should be carried out in every postmenopausal patient who has a bleeding problem.

Staging of Endometrial Cancer

Prior to January 1971 endometrial cancer was staged as follows:

Stage 0: Cases which the pathologist considers most likely to be of carcinomatous nature, although a definite microscopic diagnosis is impossible.

Stage I: The growth is limited to the uterus.

Group I: Operation advisable.

Group II: Bad operative risks.

Stage II: The growth has spread outside the uterus.

After January 1971 a new classification was adopted, and this article follows the new classification. In the new classification, a case should be classified as carcinoma of the corpus uteri when the primary site of the growth is the corpus. Cases of mixed mesenchymal tumors and so-called carcinosarcoma should be excluded. The staging is:

Stage 0: Carcinoma in situ. Histologic findings suggestive of malignancy. Stage 0 should not be included in the therapeutic statistics.

Stage I: The carcinoma is confined to the corpus.

Stage Ia: The cancer is present in a uterus measuring up to 8 cm in length from the external os to the upper limits of the uterine cavity.

Stage Ib: The carcinoma is present in a uterus measuring more than 8 cm in length from the external os to the upper limits of the uterine cavity.

G1: Highly differentiated adenomatous carcinomas.

G2: Differentiated adenomatous carcinomas with partly solid areas.

G3: Predominantly solid or entirely undifferentiated carcinomas.

Stage II: The carcinoma has involved the corpus and the cervix (simultaneous presence of normal cervical glands and cancer in the same field will give the final diagnosis).

Stage III: The carcinoma has spread outside the uterus but not outside the pelvis.

Stage IV: The carcinoma has extended outside the true pelvis or has seriously involved the mucosa of the rectum and/or bladder. A bulbous edema as such does not permit allotment of a case to Stage IV.

Natural History

In order to treat a disease intelligently it is important to know the natural history of that disease as well as how it causes death. Adenocarcinoma of the endometrium is either localized or diffuse. The localized type may arise in a polyp but it usually presents as a raised, thickened area of endometrium. The diffuse type involves most of the lining of the upper part of the uterus with a rough granular growth. Cancer arising in the endometrium tends to remain within the uterus for a long period of time, spreading by local extension within the endometrium. As it grows it invades the myometrium and advances toward the isthmus and endocervix and from there spreads to the paravaginal and paracervical tissues, or it may invade directly through the myometrium to the serosa and peritoneal cavity. Since the lymphatics increase in amount as the serosa of the uterus is approached, deep penetration of the myometrium is associated with an increased incidence of positive node involvement. Since the myometrium in the postmenopausal

woman is much thinner than in the premenopausal woman, a little penetration of the myometrium may bring the cancer into contact with the lymphatics and account for the greater potency of endometrial cancer among the postmenopausal woman.

The lymphatic drainage of the upper part of the body of the uterus is along the course of the infundibulo-pelvic ligament. The lymphatic drainage increases as the serosa is approached, and is most evident in the deeper myometrial and subserosal areas with the larger vessels. In view of this anatomical type of drainage, the metastases should involve the aortic, caval, lumbar and high common iliac nodes. This is obviously not common in the early stages of endometrial cancer and occurs only after there is deep infiltration of the cancer which involves the deep lymphatics of the myometrium. Once the lymphatic system in the cervical area has been involved the spread of cancer parallels that seen in cervical cancer. The drainage is through the paracervical and paravaginal lymphatics to the obturator, external iliac, and hypogastric nodes. It is obvious that a cell mass of cancer in the cervix will more quickly reach efferent drainage than a comparable cell mass of cancer arising in the endometrium. Lymphatics anastomosing between the body of the uterus and the round ligament may be responsible for the rare metastasis occurring in the inguinal area.

Cancer of the endometrium not only grows locally but spreads through the lymphatic system. Results of previous studies about the distribution of lymph nodes were based on autopsy material, and are contradicted by clinical experience. There is no convincing data to bear out the concept that metastases within the pelvis are constantly associated with disease outside the pelvis. If this were so, the salvage rate could not be increased by treating the pelvic nodes. It would be difficult to achieve the 70% overall five-year survival rate. The time has come for us to reevaluate our treatment of endometrial cancer. Approximately 10-15% of cases of stage I, and 36 to 40% in stage II, cancer of the endometrium will have lymph node metastases in the pelvis. The depth of myometrial invasion also is directly related to the percentage of lymph node metastases. Lewis[6] reported on 16 cases in which there was no myometrial invasion, and 41 in which there was less than 2 mm invasion. None of the 57 patients had pelvic node metastases. However, when the invasion extended within 2 mm of the serosa, 36% had metastases to the pelvic nodes. The depth of invasion correlates well with the incidence of positive nodes. In a collected series, 16 patients among 53 (30%) with positive nodes lived five or more years. In view of these findings it is obvious that the nodes should be treated with surgery and/or radiation, particularly among those at high risk for pelvic nodal metastases. It is evident that a test is needed that will help in selecting those patients who will be benefited by a node dissection. Perhaps, in the future, those patients showing good cell immunity and no enhancing or blocking antibodies, in whom the nodes grossly appear normal, may be best treated by leaving the nodes in situ,while those with poor cellular immunity and a high blocking antibody may be candidates for eradicating the pelvic nodes, either by surgery or irradiation.

The histological grading serves as one more parameter for evaluating the incidence of pelvic node metastases and depth of myometrial invasion. Although

histological grading does not correlate as well as does the depth of myometrial invasion with the incidence of nodal involvement, it should be carried out. Reports indicate that cytologic grading of endometrial carcinomas, particularly by measuring nucleoli and their RNA content, has demonstrated that the higher grade carcinomas have larger single nucleoli, more multiple nucleoli, and greater variations in nuclear and nucleolar structure. Nuclear grading may be considered an adjunct to and refinement of histologic grading of cancers. Nuclear grades are as follows: Nuclear grade 1 is the most abnormal, with wide variations in nuclear sizes, chromatin content, and appearance of nucleoli. Nuclear grade 2 has definite but less severe nuclear and nucleolar atypism. Nuclear grade 3 comprises differentiated cancer cells whose nuclei closely resemble those of adjacent non-neoplastic cells.

In summary, it can be stated that the group at high risk for extrauterine spread have (1) involvement of the lower uterus or cervix, (2) histologic grade 3 lesions, and (3) myometrial invasion.

Treatment

The patients will be discussed according to the staging methods established by the FIGO classification. There were 189 patients treated from 1962 to 1972, a nine-year period, 96 of whom were suitable for a five-year evaluation and 93 of whom were treated in the last four years of the study. Of this number, 150 were in stage I, 17 in stage II, 12 in stage III, and 10 in stage IV. Of this group, two patients treated five or more years ago, and one patient treated in the past four years were lost to followup. Therefore, all 189 are available for study of depth of invasion, differentiation of tumor, and site of the primary lesion, but only 186 are available for survival evaluation (Fig 1), and the three not found in followup are considered dead. From 1962 to 1968, 96 patients were studied as listed in Fig 2. When the penetration of the myometrium was 50% or less, 62 of 67 patients lived five years, while four of nine survived five years if the penetration was greater than 50%. Fig 3 gives the same evaluation for patients treated in the last four years of the study.

Although the patients treated more than five years ago received 21 different modalities of therapy, there were only four major types of treatment and the remainder represented variations of the radiation therapy (Fig 4). The type of treatment for patients treated in the last five years is given in Fig 5.

The survival rate is given in Fig 6. In stage I, 68 patients (1 lost to followup and reported as dead) of 76 (89.4%) are living and well at five years. Comparable figures are 5 of 8 (62.5%) in stage II; 4 of 6 in stage III; and 0 of 6 in stage IV. The overall survival rate is 80.2% living and well at five or more years.

Twenty-eight patients of the 189 had a radical hysterectomy and 22 are living and well. Of the 28 patients receiving a radical hysterectomy, 15 were operated on five or more years ago and 12 are living and well after more than five years.

Cervical Involvement

The problem of cervical involvement is considered as a separate entity because of the poor prognosis in this stage of endometrial cancer (stage II). It has long been accepted that a conservative total hysterectomy in most instances is inadequate

therapy because of the possibility of cutting across cancer and areas which may have spread to the paracervical areas. The findings in endometrial cancer are not dissimilar to those reported for cancer of the cervix. It is extremely important to determine whether the endocervix is involved by endometrial cancer. Preoperatively, this can only be evaluated by a careful endocervical curettage. In such cases, the simultaneous presence of normal cervical glands and cancer in the same piece will give the final diagnosis. Stage II accounts for 10 to 15% of endometrial cancer, whereas positive nodes will be found in at least 36 of 37%. In addition, as the endometrium invades the myometrium, there is growth toward the cervix and from there into the parametrial tissues. The anaplastic and poorly differentiated cancer has a propensity for deep invasion of the myometrium, spread to the cervix, and involvement of the pelvic nodes. In view of these findings and the relatively low survival rate of 50% (range 40 to 70%), it is most important to have a careful preoperative diagnosis and workup. An aggressive combination of both radiation and surgery is indicated for these patients.

Recurrent Cancer of the Endometrium

Barber and Brunschwig[7] reported on the results of treatment for recurrent cancer

1. Cancer of endometrium, 1962 to 1972.

Stage	I	II	III	IV	Total
Grade					
I	20	4	0	0	24
II	115	10	10	6	141
III	15	3	2	4	24
Total	150	17	12	10	189

2. Cancer of the endometrium, 1962 to 1968.

Stage	I			II		III		IV	
Depth of uterus			5-Year Survival						
	Ia	50	46*						
	Ib	26	22						
Differentiation									
G1		10	8						
G2		61	56						
G3		5	4						
Cell grading (Nuclear grade)		11-52-13							
Depth of invasion: Per cent = Depth of invasion / Myometrial thickness	%	No.	5-Year Survival						
	0-25	57	53*	6	4*	2	2	2	0
	26-50	10	9			1	1	1	0
	51-75	6	4	2	1	2	0	2	0
	76-100	3	0	0	0	1	1	1	0
Site of primary		Fundus	66			Fundus 6		Fundus 6	
		Cornua	10	Endocervix 8					

*1 lost to followup

of the endometrium. Of 36 patients receiving pelvic exenteration, 7 received their initial treatment less than one year prior to treatment for recurrence, and none survived more than 15 months. Five of 29 patients who were free of disease for at least one year after initial treatment and before receiving pelvic exenteration for recurrence lived five or more years.

Although there are fewer indications for pelvic exenteration among patients with cancer of the endometrium than in those with cervical cancer, there is a place for pelvic exenteration among the methods of treatment used as definitive therapy for this cancer. If indeed the progestins are able to provide a five-year cure in advanced cancer of the endometrium, this will become the treatment of choice. Although certain spectacular results have

3. Cancer of endometrium, 1968 to 1972.

Stage		I		II		III		IV	
Depth of uterus			5-Year Survival						
	Ia	48	45*						
	Ib	26	22						
Differentiation									
G1		10	8*						
G2		54	51						
G3		10	8						
Cell grading (Nuclear grade)		10 - 54 - 10 9 - 56 - 9							
Depth of invasion: Per cent = Depth of invasion / Myometrial thickness	%	No.	5-Year Survival						
	0-25	54	50*	4	4	1	0	2	0
	26-50	12	10	2	1	2	2	1	0
	51-75	5	5	2	2	2	2	1	0
	76-100	3	2	1	0	1	1	0	0
Site of Primary	Fundus	68		Endocervix 9		Fundus 6		Fundus 4	
	Cornua	6							

*1 lost to followup

4. Cancer of the endometrium, 1962-1968.

	Stage I		Stage II		Stage III		Stage IV	
	No.	Living	No.	Living	No.	Living	No.	Living
Total abdominal hysterectomy, bilateral salpingo-oophorectomy + other treatment	59	54	3	2	5	4	1	0
Supracervical hysterectomy + other	2	2					1	0
Radical hysterectomy	8	7	4	3	1	0		
Vaginal hysterectomy + other	5	3						
Miscellaneous	2	2	1	*			2	0
No treatment							2	0
Total	76	68*	8	5*	6	4	6	0

*1 lost to followup

been recorded, there is no series of any magnitude currently reported, and pelvic exenteration, when indicated, remains the best method of treatment.

Based on our study and a review of the literature, a protocol is presented for pretreatment evaluation and for therapy. The preoperative workup is as follows:

1. Routine history and physical examination
2. Complete blood count
3. Urinalysis
4. SMA-12 (urea nitrogen, glucose, calcium, phosphorus, etc)
5. Chest x-ray
6. Intravenous pyelogram
7. Metastatic x-ray studies

Optional:

8. Proctoscopy
9. Barium enema
10. Cystoscopy
11. Bone scan
12. Lymphangiogram

Each patient should be examined under anesthesia, and a fractional curettage with sounding of the uterus should be carried out.

Therapy

Stage 0: Carcinoma in situ. The management should be guided by the definition established by the pathology department of a given hospital, and should be tailored to fit the needs of the patient, her age, and desire for future childbearing. In selected young patients with minimal disease, an alternative to hysterectomy may be repeat curettage in three or four months or a course of progestational agents followed by repeat curettage.

Stage IaG1: Total hysterectomy and bilateral salpingo-oophorectomy followed by postoperative vaginal radiation.

Some oncologists may elect a random study employing a type of radical hysterectomy.

In patients in whom the histological grade is G2 or G3, external pelvic radiation should be given preoperatively fol-

6. Cancer of the endometrium.

		Number	Living 5 or More Years	%
Stage I				
	Ia	50	68*	89.4
	Ib	26		
	G1	10		
	G2	61		
	G3	5		
Satge II		8	5†	62.5
Stage III		6	4	66.6
Stage IV		6	0	
Total		96	77	80.2

*1 lost to followup
†2 lost to followup

5. Cancer of endometrium, 1968-1972.

	Stage I		Stage II		Stage III		Stage IV	
	No.	Living	No.	Living	No.	Living	No.	Living
Total abdominal hysterectomy, bilateral salpingo-oopherectomy + other	61	56*	3	1	4	4	1	1
Supracervical hysterectomy	1	1						
Vaginal hysterectomy	3	2						
Radical hysterectomy	7	6	5	5	2	1	1	1
Dilatation & curettage, radium and cobalt	1	1	1	1			2	2
Refused treatment	1	1						
Total	74	67*	9	7	6	5	4	4

*1 lost to followup

lowed by total hysterectomy, bilateral salpingo-oophorectomy, and vaginal radiation postoperatively.

If preoperative external radiation has not been given and the surgical specimen reveals moderate or extensive myometrial invasion (one-third or more of myometrial penetration), postoperative external radiation should be given. In those patients in whom the histological grade is G2 or G3 instead of G1, external x-ray therapy should be given postoperatively.

Stage Ib: Preoperative external pelvic radiation followed by total hysterectomy and bilateral salpingo-oophorectomy six weeks later. Postoperative vaginal radiation is indicated. The alternative to total hysterectomy may be a randomized selection of a type of radical hysterectomy.

Stage II: Preoperative external pelvic radiation is followed in six weeks by a modified radical hysterectomy and pelvic node dissection. Postoperative vaginal radiation should be given. Since there is an increased incidence of pelvic nodes (up to 37%) among this group, careful biopsies should be taken of the para-aortic nodes.

Stage III: If the lesion involves only the adnexal structures, preoperative x-ray therapy followed by total hysterectomy and bilateral salpingo-oophorectomy should be the treatment. Postoperatively, vaginal radiation is given. An alternative plan to total hysterectomy is to substitute a modified radical hysterectomy.

Stage IV: If the spread is limited to the pelvis with bladder and/or rectal involvement, the patient should be treated with external x-ray treatment as well as intravaginal and intrauterine radium insertion. In four to six weeks the patient should be evaluated for radical surgery. Initially, some patients may qualify for radical surgery, and if the disease is limited to the midline, pelvic exenteration should be considered as a modality of treatment.

Distant Metastases: Primary progestational therapy is indicated. Localized disease without response to progestational therapy should be treated with x-ray therapy.

In the presence of widespread disease and no response, chemotherapy should be tried. However, in general, cancer of the endometrium does not respond to chemotherapy.

Recurrent Adenocarcinoma of the Endometrium: Primary therapy is started with progestational agents.

Localized symptomatic cancer should be treated with radiation.

Selected patients may be candidates for pelvic exenteration.

Radiation Therapy

Adjunctive radiotherapy in a patient with stage IaG1 disease does little to improve survival. However, in farther advanced disease, there is no doubt that adjunctive radiotherapy does add to the number of women who are alive at five years. Its effect, basically, is diminishing the mortality due to reduction of local recurrence, particularly in the vault.[8]

There used to be some discussion as to relative effectiveness of the preoperative or postoperative radiation.[9,10] Most physicians believe that there is little or no difference whether the radiation is given before or after the operation. Many of the institutions no longer give preoperative radiation, but instead advocate external or internal radiation starting about the tenth postoperative day. Basically, with localized disease, local radiation using radium or cobalt is adequate, but if the tu-

mor is outside the uterus, external beam therapy is necessary. Gusberg[11] has shown that it is extremely difficult to calculate the dose inside the uterus when one uses multiple Heyman capsules. In calculating the optimum dosage, he uses the basic plan of delivering 3,000 gamma R to a point 1 cm from the uterine cavity, and 1,800 R at a point 1 cm below the vaginal mucous membrane. This, of course, is not a cancericidal dose. If the tumor spreads beyond the uterus, the results are poor whether the patient receives radiation or not. Lebherz[4] has a somewhat different approach. In his clinic in Los Angeles, preoperative external therapy of 3,500 rads over three weeks is advised. The x-ray is finished on Friday and operation is on Monday. No radium is used. Lebherz maintains that his results are comparable to those in reports from clinics using radium. Lewis[4] suggests that if the patient is in poor medical condition and cannot tolerate operation, or if there is any manifestation of metastases outside the pelvis, the patient should receive external radiation of the whole abdomen, followed by radium five to six weeks later in the uterus and vagina. If the disease is localized in the pelvis, only the pelvis is radiated.

The management of endometrial carcinoma associated with pyometra is somewhat different from those cases not involved with this complication. The triad of symptoms consisting of vaginal spotting, vaginal discharge, and rectal or suprapubic pain should alert one to this possibility. The diagnosis is made by passing a sound. One should be very aware of the possibility of perforation, since the wall of the distended uterine cavity is extremely thin and may release a foul discharge. Anerobic organisms are found in about 90% of cases, the most frequent being anerobic streptococci. One should not do a dilatation and currettage at the time of the original drainage. One should dilate the cervix daily or insert a catheter. After the discharge has ceased, and the patient is normal, a diagnostic dilatation and curettage should be done. Based upon the findings, one should then treat the case as outlined previously.

Although the indication for the use of radiation therapy is given for each stage in the protocol, a more detailed plan is presented for guidance in the actual management of the patient. In stage IaG1, with a well differentiated tumor and a uterine cavity of 8 cm or less, no preoperative radiation is used. However, postoperative radiation in the form of vaginal application of radium delivering a dose of 700 rads at 0.5 cm every two weeks for three doses is recommended. If the tumor is found to invade more than one-third of the myometrium, external therapy should be added delivering 4,000 rads in four weeks to the pelvis. In stages Ia (G2, G3) and stages Ib (G1, G2, G3) with a uterine cavity of less than 8 cm and a moderately undifferentiated tumor, or a uterus of greater than 8 cm depth, particularly in the postmenopausal patient, preoperative external therapy delivering 4,000 rads in four weeks is followed by the postoperative use of vaginal application for a dose of 700 rads at 0.5 cm every two weeks for three applications. In stage II, where there is involvement of the cervix, preoperative external therapy delivering 4,000 rads in four weeks is followed by a radical hysterectomy and node dissection, as well as using vaginal applications delivering 700 rads at 0.5 cm every two weeks for three treatments. Stage III, which has spread to the adnexa, is treated preoperatively by 4,000 rads in four weeks to the entire pel-

vis, followed postoperatively with 700 rads at 0.5 cm every two weeks for three treatments. In all other instances of stage III cancer, primary radiation is generally recommended. In stage IV, limited to the pelvis with bladder and/or rectal involvement, primary radiation therapy is generally recommended as outlined above. When distant metastases are present primary x-ray therapy should be given to the pelvis and the progestational agents given to control the metastatic cancer. The external therapy administered to the pelvis should include the lymph node areas of the pelvis.

Hormone Receptors

With the discovery that breast cancer cells retained the ability to incorporate and retain estrogens, both in vitro and in vivo, a new era was started in cancer endocrinology. The road has been uphill, but a great deal of information is now available to us. For those interested in this problem, it is important to be familiar with the background of the hormone dependent and hormone nondependent tumors. The concept of utilizing the available data on hormone receptors in clinical oncology would eliminate much of the guess-work in spotting the high-risk patient, supply a more logical method of selecting monitoring therapy, and would also supply a method for selecting and controlling the management of recurrent endometrial cancer.

Cells which depend on hormones for optimal growth and function contain specific steroid binding proteins, so-called hormone receptors. Jensen's work in the selective binding of estradiol by the rat uterus opened this field of research. The mechanism for the interaction of the hormone with target cells takes place by a two-step mechanism. Perhaps there are as yet an undetermined number of steps.

The primary event of hormone action is the specific interaction between hormone and responsive cell. Since many cells do not recognize certain hormones, the receptor sites are highly specific. Since few hormones show any effect when added directly to cell-free systems, it is concluded that the action starts at the cell membrane. For the past nine or ten years it has been known that hormones regulate the synthesis of protein and ribonucleic acid (RNA). The steroid first binds to the extranuclear receptor and is then transported into the nucleus. It then becomes associated with specific acceptor sites in the chromatin. The hormones activate genes and direct transcription of a new group of messenger RNAs which, by a process of translation, can code for the synthesis of specific proteins. Estradiol and progesterone have been shown to act by modifying nuclear gene expression (transcription). The major amount of data has been accumulated by the blocking action of actinomycin D, which blocks the synthesis of messenger and ribosomal RNA, and puromycin and cycloheximide, which block translation and inhibit the protein synthesis. These two antimetabolites have been used to determine the step at which the hormone acts. Autoradiography has demonstrated the nuclear localization of the tritium-labeled hormone in the uterus and the fallopian tube. In summary, the specific association of a hormone with a binding protein is necessary as a preliminary to its action at the nuclear effector site on the gene. This leads to stimulation of the RNA transcription and then to protein synthesis. For peptide hormones the ubiquitous cyclic adenosine monophosphate (A MP) seems to be an intracellular messen-

ger. It mediates the production of AMP 3′, 5′ adenosine monophosphate. It acts as an intracellular messenger modifying patterns of biosynthesis through the repression or depression of genes. The message is received and decoded by the interaction of the hormone with the cell membrane. A link between these two systems has been established through the observation that progesterone increases cyclic AMP formation, and that cyclic AMP itself can affect gene transcription and translation. The hormone can be considered the first hormone joining up with a macromolecular protein on the cell membrane. An enzyme, adenylcyclase, can change adenosine triphosphate to 3′, 5′ cyclic adenosine monophosphate and act as a second messenger. This results in hormone action (third messenger), ie, gluconeogenesis, steroidogenesis, lipolysis, and permeability.

Nordqvist,[12] in a series of patients, showed that when negative patterns for receptors were present, only 3 of 26 had remission after hormone treatment, while 10 of 13 experienced objective remission when the cancer cells show evidence of good hormone receptor mechanism. Important observations on progesterone interaction with target cells have shown that the binding capacity of progesterone is increased by 20 times when the animal is primed with estrogens. It has been concluded that cancer cells without hormone binding ability are unlikely to be hormone dependent and to respond to endocrine therapy. Nordqvist[13] has reported that the most direct effect of progesterone is inhibition of growth rather than differentiation. However, receptors may be present without the tumor being able to respond to the hormones, and are probably related to other changes in the genetic code.

A great deal of work has been done on the association between cancer of the endometrium and hormone stimulation. Paradoxically, cancer of the endometrium occurs at a time when the hormone titer is decreasing. There may be explanations for this, for example, low doses of estrogen may serve to stimulate while a normal or high titer may act as a feedback mechanism and serve as a control or regulator of hormone secretion. A brief review of the estriol/estradiol-estrone ratio may clarify the problem. Estriol has been considered a noncarcinogenic estrogen, while estradiol and estrone have been considered to be carcinogenic. It is concluded that estriol acts as an antagonist of carcinogenic activity of estradiol-estrone. Compared with Caucasian women, Oriental women, who have a low incidence of cancer of the endometrium, breast, and ovary (which are hormone dependent organs), have a high estriol titer between ages 15 to 19 years. However, as each group moves toward age 40 the difference decreases until it is negligible. Since there is little difference at the time that cancer in these three organs begins to develop, it must be concluded that estriol served to protect the immature cell. This may be similar to the reported group of cases in which the immature cells were changed and 14 to 20 years later a malignancy in the form of a Müllerian type of adenocarcinoma of the vagina appeared. The role of the stilbestrol is difficult to evaluate since estrogens are growth stimulants but not cell transformers.

Hausknecht and Gusberg[14] measured the *urinary* metabolites of estradiol in normal postmenopausal women and in postmenopausal women with endometrial carcinoma. They found no statistical difference in the excretion of the classical

estrogen nor in the estriol quotient. Sutery[14] suggests that there is an increased peripheral conversion (two or three times over the normal) of estrogen precursors, mainly androstenedione, in the postmenopausal woman that produces an excess amount of estrone. This, in turn, may produce endometrial hyperplasia in older women. Gusberg showed that there is a higher ratio of estrone to estradiol in the blood of postmenopausal women with endometrial cancer. They did find that the postmenopausal woman with endometrial cancer excretes less total estriol glucuronide as compared to estrone glucuronide than the normal postmenopausal woman, and suggested that the protective effect of estriol was lost. Gusberg also reported a significantly higher conversion rate of Δ 4-androstenedione to estrone in those postmenopausal women with endometrial cancer, and Rubin, measuring the circulating estrone and estradiol concentrations, showed the mean ratio once again to be significantly higher for those with cancer. Gusberg reported that it appears that the postmenopausal prehormone is androstenedione, and that the notable postmenopausal estrogen is estrone. Additional reports indicate another point that cannot be adequately explained —90% of patients with endometrial cancer have ovarian stromal hyperplasia.

Nordqvist[13] had investigated the influence of steroid hormones on human endometrial carcinoma in organ cultures and heterotransplants. Progesterone impaired the success of organ culture and estrogen was found to potentiate these cytostatic and cytolytic effects. In culture, the endometrial cancers showed a marked dose-dependent sensitivity to progesterone, which reduced the mean DNA synthesis to 46% and the RNA synthesis to 39% of control values. Among a series of cases of endometrial cancers treated with high-dose progesterone, about 75% showed decreased survival in organ cultures and a significantly reduced DNA synthesis in vitro and in vivo.

Luteinizing hormone (LH) secretion in patients with endometrial carcinoma is seven times greater than in the normal population.[15] This can be restored to normal with the administration of 17 alpha hydroxy-progesterone acetate to these patients. These changes, that is, the elevation of LH, cannot be demonstrated in women with ovarian or breast cancer.

The use of contraceptive pills containing estrogen and progesterone has been said to offer protection against carcinoma of the endometrium. There are at least three cases known of people who have developed endometrial carcinoma while on sequential contraceptives. Perhaps this medication does not give one the protection that combined medication for 21 days does, especially since in our present concept a minimum dose of estrogen is given.

The mechanism of action so far as the progestins are concerned has not been elucidated. It is not known whether they have a suppressant effect, or if there is a change in sex steroid components or sex steroid support of the tumor, or if there is direct action upon the neoplastic cell itself. It has been noted that if the vaginal smear shows that the continuous estrogenic effect has been suppressed by progesterone, there is usually uninterrupted tumor progression. It also has been postulated that progestins seem to work better if there has been no prior irradiation. Kistner[4] makes the point that when there is remission with one agent followed by eventual failure, if one switches to another progestin, this may produce a further re-

mission. The main drugs used are 17 alpha hydroxyprogesterone acetate (Delalutin) intramuscularly in doses of 3,000 to 5,000 mg weekly. This is continued indefinitely until the patient's tumor escapes. With the use of progesteronal agents, it is rare that the patient will show clinical remission in less than 8 to 12 weeks of therapy. Depo-Provera (medroxy progesterone acetate) in daily doses of 400 mg intramuscularly until 15 or 30 gm are given over a 50- to 80-day period seems to be equally successful. The maintenance dose is then dropped to 1,250 mg/week. This, too, is continued until the patient fails to show a response. Megestrol acetate (Megace) given in doses of 20 mg four times a day (17 alpha acetoxyprogesterone) seems to be equally as good as other progestins. It has the great advantage of being an efficient oral medication. In some instances as much as 320 mg a day has been used for long periods. All in all, most people reported about a 30-35% response to any of these progestins—the average response lasting anywhere from 12 to 20 months. Lewis makes the point that if the patient does get a remission from progesterone initially and there is then a relapse with advance of the disease, one might switch to alkylating agents. This sometimes can control the cancer for an additional year or two, at which time there is generally marrow failure and one is forced to abandon this mode of therapy. However, if one switches back to a progestin, this again may control the disease. If it does not, it will at least give symptomatic relief to the terminal patient. He also states that progestin, if not used as primary therapy (he cites 300 cases) but as an adjunct to other therapy, does not affect the final cure rate. In other words, progestin plus hysterectomy, for instance, did not affect the final cure rate.

Progress is being made in understanding the role of hormones among patients with cancer of the endometrium. Soon it will be possible to apply this knowledge in selecting patients for hormone treatment and will provide a method of monitoring therapy.

Discussion

Despite the fact that these results have been achieved from treatment by unsophisticated techniques, there is still controversy over the best treatment for cancer of the endometrium. It is axiomatic that once a diagnosis is made a plan of treatment must be formulated to give the best results. In a British review on this subject the statement was made that "it appears that in the best hands there is little to choose between the results obtained by hysterectomy with removal of the adnexa, hysterectomy plus pre- or postoperative radiotherapy, vaginal hysterectomy and irradiation alone." "By each of these treatments the experts appear to be able to produce a 3 out of 4 chance of 5-year apparent cure in the most favorable type of case."[16]

By the last statement, the author placed an obligation upon the physician for choosing the best form of treatment for a given patient. Bichenback[17] has decisively demonstrated that radiation therapy alone is inferior to surgery or a combination of surgery and radiation. Few physicians working the field recommend radical hysterectomy as a routine. Perhaps only about one in five or one in four would be suitable for this approach. However, it is important to have parameters (depth of invasion, site, grading and cel-

lular morphology) available that will indicate that extrauterine spread is likely. In these patients, treatment in the form of surgery or irradiation should be employed to extend beyond the uterus and to include the pelvic nodes. The patients at risk for spread beyond the uterus are those with involvement of the cervix or lower uterus, grade III lesion and myometrial invasion beyond one-fourth of the myometrium. If tumor spreads to adjacent structures and metastasizes to pelvic glands, the only logical treatment would be one capable of destroying cancer cells in all these sites. Philosophically speaking, the problem of treatment is as simple as that. This may be impossible in practice, or may be achieved only at the risk of complications so serious that it would not be justified.

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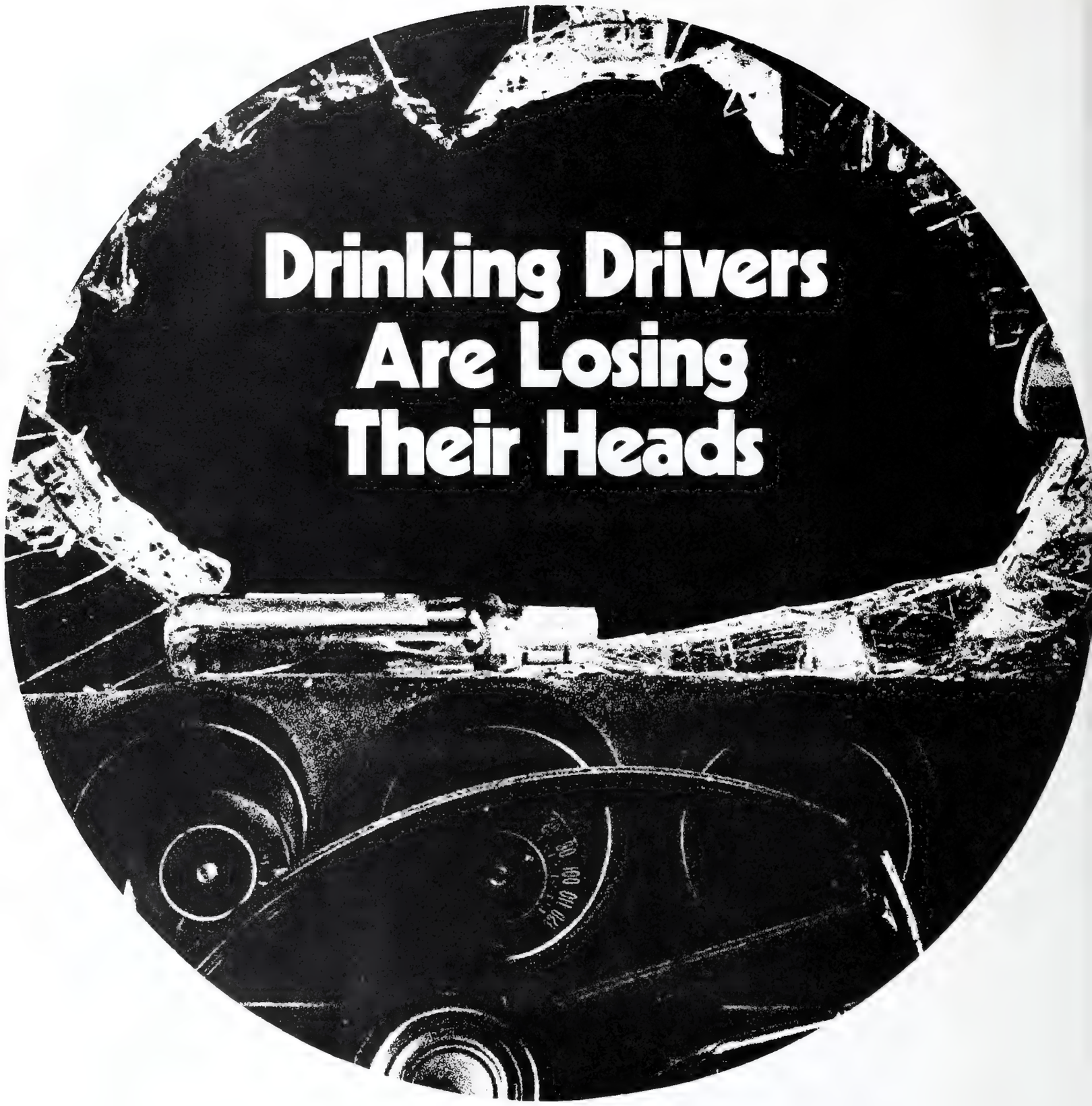

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Complications of amniocentesis

Capt Philip J. Mead, USAF, MC; Lt Col Robert E. Harris, USAF, MC

Amniocentesis has been increasingly utilized in the management of high-risk pregnancies, eg, in women who have diabetes, Rh-negative isoimmunization, or in cases where genetic defect or preterm delivery is likely. The lecithin/sphingomyelin ratio has now received enough study to place it on firm ground as an indicated procedure, available to any well-run obstetrical service, for management of high-risk pregnancies.[7] However, an increasing number of fetal and maternal complications, secondary to amniocentesis, are being reported (Fig 1).[1-6,8-23] Thus, the routine use of amniocentesis prior to every repeat cesarean section, especially those in which the expected date of confinement probably is correct, must be critically appraised.

During 1973, 169 amniocenteses have been performed by the obstetrical service of the Wilford Hall USAF Medical Center for varying diagnostic reasons. Four significant complications have occurred and are presented in this report.

Case Reports

Case 1: A 33-year-old woman, gravida 4, Para 3003, had a positive indirect Coombs titer at 1:64 at 38 weeks gestation. Abdominal amniocentesis was performed without immediate complications. However, within 12 hours the patient noted a vaginal leak of amniotic fluid.

Results of physical examination on admission were within normal limits except for a McDonald uterine fundus measurement of 38 cm, with fetal vertex presenting. There were normal fetal heart tones in the right lower quadrant of the abdomen and amniotic fluid in the posterior vaginal fornix, and the cervix was dilated 2 cm and effaced 25%. Despite adequate pelvimetry and uterine contractions with Syntocinon, the cervical dilation only progressed to 6 cm, with the fetal head remaining at minus 3 station. A primary cesarean section for relative cephalopelvic disproportion was performed and a 7 lb, 15 oz male, Apgar 8/9, was delivered. On the first postoperative day, the patient's temperature was 102F, secondary to endometritis, which resolved with antibiotic therapy. Hyperbilirubinemia secondary to Rh incompatibility developed in the infant. He required three exchange transfusions and did well thereafter.

Case 2: A 20-year-old woman, gravida 1, Para 0000, was admitted at 43 weeks gestation for evaluation of postmaturity. Physical examination on admission was within normal limits, except the McDonald measurement of the uterine fundus which was 36 cm, with a single fetus floating in the vertex position. The estimated fetal weight was 8 lb and fetal heart tones were heard in the right lower quadrant of the abdomen. The cervix was long and closed. Amniocentesis was performed to evaluate the lecithin/sphingomyelin ratio prior to induction of labor. Bright red blood was obtained during the procedure, and after removal of the needle, fetal heart tones were counted at 190/minute. An emergency cesarean section was performed, and an anterior placenta, with lacerated vessel on the fetal side, was noted. A 7 lb, 12½ oz infant, Apgar 8/9, was delivered. Postoperatively, mother and child did well.

Case 3: A 28-year-old woman, gravida 2, Para 1001, whose first pregnancy was terminated by cesarean section, was evaluated at 39 weeks gestation for fetal maturity. Amniocentesis was performed and the lecithin/sphingomyelin ratio was 1:3. Repeat

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cesarean section was not performed, and at 40 weeks gestation the patient returned for reevaluation. The McDonald measurement of the uterine fundus was 38 cm and the fetus was floating in the vertex position with fetal heart tones in the left lower quarter of the abdomen. The cervix was long and closed. Four amniocentesis attempts (three nuchal and one parumbilical) were unsuccessful. After the last attempt, no fetal heart tones were heard and fetal death was thought to have occurred. Subsequently, an 8 lb, 4 oz stillborn was delivered via repeat cesarean section. No cause for fetal death could be determined.

Case 4: A 31-year-old gravida, Para 4023, was admitted at 31 weeks gestation with the diagnosis of symptomatic hydramnios. By all criteria, the patient's expected date of confinement was correct. An x-ray film of the abdomen revealed a single fetus with normal appearing bony structure. On admission the patient was extremely anxious and her pulse rate was 120/minute; respiratory rate 24/minute; and blood pressure 104/60 mm Hg. The McDonald measurement of the uterine fundus was 48 cm, and fetal heart tones were in the right lower quarter of the abdomen. Amniocentesis was performed removing 2 liters of amniotic fluid with a lecithin/sphingomyelin ratio of 0:9. An amniogram appeared to be normal. Two days later, the patient had abdominal pain, and her cervix was dilated 7 cm and completely effaced. She was delivered of a 3 lb, 3 oz female, Apgar 1 at one minute. The infant had a large hamartoma of the right kidney and died postoperatively. The patient developed endometritis immediately postpartum. Amniotic fluid (obtained at delivery) and two blood cultures grew *Staphylococcus epidermidis,* which was not a contaminant but probably had been introduced during the amniocentesis. The patient responded well to antibiotic therapy.

Discussion

Amniocentesis is an invaluable aid to the obstetrician managing high-risk pregnancies. Yet, as illustrated by these four cases, the procedure is not without hazard, and the indication for amniocentesis should be individualized for each patient, weighing the hazards of the procedure against the amount of information to be gained by it. Dunn and Bhatnagar[7] have shown the value of amniocentesis and the resultant lecithin/sphingomyelin ratio in 96 high-risk pregnancies. However, a mandatory routine amniocentesis prior to every repeat cesarean section may well lead to a higher incidence of complications and subsequent fetal wastage.

The cases presented herein illustrate some of the known complications with amniocentesis. Although uncommon, amniotic fluid leaks following amniocentesis have been reported,[18] as in case 1. When this occurs near term, the fetal outcome may not be jeopardized; earlier in gestation there may be fetal death.[18] Maternal amnionitis is a definite possibility, as occurred in case 1.

Fetal hemorrhage, following the laceration of a fetal placenta vessel during amniocentesis, is a complication which has been reported with increasing frequency.[5,11,13,15,19] As in case 2, emergency cesarean section is indicated if the fetus is near estimated maturity, as fetal death from exsanguination has been reported. Thus, amniocentesis must be performed in an area where immediate cesarean section may be performed. The management of bloody amniocentesis taps emphasizes the importance of identifying fetal blood and monitoring the fetus, if the fetus is immature.[8,15,16,19] To attempt to prevent this complication, placental localization with ultrasound, prior to amniocentesis, and the use of the suprapubic and nuchal approaches in amniocentesis have been recommended to reduce the incidence of passage of needles through an anterior placenta.[6,7,19] It has been estimated that between 40 and 60% of amniocenteses yield bloody fluid.[2,14]

Unexplained fetal death, as in case 3, has been reported following amniocentesis.[18] This is the most feared complication of amniocentesis, and it is a contraindication to a mandatory hospital policy that calls for amniocentesis prior to all repeat cesarean sections without individual

evaluation of each patient's situation.

Case 4, the patient with amnionitis, deserves special comment as the causative organism was a usually benign bacteria, *Staphylococcus epidermidis*. This bacteria has recently been found to be the etiological agent for a number of nosocomial infections in other hospitals as well as at Wilford Hall USAF Medical Center. Amnionitis, secondary to amniocentesis, has resulted in both fetal and maternal death.[2] Accompanying peritonitis has been reported as a complication of amniocentesis.[10] Thus, aseptic techniques always must be followed when performing amniocentesis.

Conclusion

The complications, maternal and fetal, of amniocentesis have been reported increasingly. Placental localization with ultrasound is of value, but may not be available to many obstetricians. Therefore, a definite plan should be used to approach cases in which bloody fluid is drawn. Monitoring and cesarean section facilities should be available in the event that fetal hemorrhage occurs. Thus, amniocentesis should be approached thoughtfully, with individual assessment of each patient, and always preceded by the question, "Is the information which I will gain from this procedure worth the potential complications which are known to occur?"

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1. Reported complications of amniocentesis.

Maternal:
Death (infection, hematoma)
Peritonitis (noninfectious and infectious)
Hemorrhage from lacerated uterine vessels
Fetal-maternal transfusion (isoimmunization)
Perforation of bowel or bladder
Abdominal wall hematoma
Abdominal wall emphysema
Placental-amnion:
Laceration of placental blood vessels (hemorrhage)
Infection (amnionitis)
Premature labor (unusual)
Abruptio placenta (unusual)
Fetus:
Sudden death
Exsanguination
Anemia at birth
Laceration of organs:
Spleen (hemorrhage)
Liver (hemorrhage)
Cardiac (tamponade)
Ocular damage
Brain
Hematomas (subdural, cord, thorax)
Pneumothorax
Infection
Retained catheter tip

Familial occurrence of ganglioneuromas

Jon F. Bergstrom, MD; John M. Long, MD

The group of neurogenic tumors composed of neuroblastomas and ganglioneuromas are common lesions, but familial occurrences of neuroblastomas have only rarely been reported. The familial incidence of ganglioneuromas has not been reported previously. The present reports and review were undertaken when a father and son were found to have ganglioneuromas and the chance occurrence was questioned.

Case Reports

Case 1: A 6-year-old boy was admitted to Tripler Army Medical Center and underwent an appendectomy. The admission chest films (Figs 1a, b) revealed bilateral posterior mediastinal masses which were subsequently resected and found to be ganglioneuromas. Additional radiographic and clinical evaluation failed to reveal evidence of other masses. All 3-methoxy-4-hydroxymandelic acid (VMA) determinations were negative.[19]

Case 2: Two and one-half years later the child's 33-year-old father was found to have a posterior mediastinal mass (Figs 2a, b, c). The chest films were obtained during admission for treatment of atrial fibrillation. No other masses were found during further radiographic and clinical examinations. The patient underwent a thoracotomy and excision of the ganglioneuroma. His family history revealed one son (case 1) with bilateral ganglioneuromas. A second son had died in the first months of life as a result of complications of aganglionosis of the colon. Two other children had no pertinent medical history.

1a.

1b.

1. Case 1. a. Posteroanterior, and b. lateral radiographs of the chest showing bilateral ganglioneuromas presenting as posterior mediastinal masses. (Fig 1a from Scheetz and Serfas.[19])

Discussion

The most common radiographic presentation of ganglioneuromas and neuroblastomas is as masses in the posterior mediastinum or abdomen. Calcification may be demonstrated radiographically, but it is seen more frequently histologically. The presence of calcification is of no help in predicting which neurogenic tumors are malignant.[7] Rib separation and erosion are commonly seen.

Ganglioneuromas and neuroblastomas may be discovered as masses found on palpation of the abdomen. The majority of patients have no symptoms from the tumor. In some cases the tumor compresses adjacent organs producing physical signs and symptoms. Symptoms of excessive pressor

2a.

2c.

2b.

2. Case 2. a. Posterior, and b. lateral radiographs of the chest, and c. coned anteroposterior view showing a ganglioneuroma presenting as a paraspinous mass.

amine secretion may be present. The tumor may also extend from its origin in the chain of sympathetic ganglia through intervertebral foramina, resulting in spinal cord compression. Although ganglioneuromas most commonly arise from the sympathetic chain extending from the base of the skull to the pelvis, many cases arising from the central nervous system,[11] as well as from scattered areas throughout the body, have been reported.[16]

The urinary excretion of VMA may be elevated in patients with ganglioneuromas[7] as well as neuroblastomas. This determination, consequently, is not of value in predicting the malignant nature of neurogenic tumors preoperatively. When the urinary excretion of VMA is elevated preoperatively, postoperative serial determinations may be used to detect recurrence.

Ganglioneuromas were first described in 1870 by Loretz.[13] They are benign solitary cells. Since there is little evidence that mature ganglion cells can multiply in vivo, it is assumed that during its formative stages a ganglioneuroma is composed of immature neuroblastic tissue.[10]

In 1927 Cushing and Wolbach[4] first reported a patient with a neuroblastoma which was later found to be a ganglioneuroma. Hamilton[7] reviewed ganglioneuromas in childhood. Two of his cases also "matured" to ganglioneuromas, and two cases showed only residual fibrous tissue. Six additional patients demonstrated clinical evidence of maturation. Hamilton's review of the literature presents convincing evidence of the maturation, in toto or in part, of neuroblastomas to ganglioneuromas.

Many authors have considered the neuro-ectodermal lesions and their possible familial transmission. Neurofibromatosis is well established as a hereditary disorder, and pheochromocytomas also are inherited dominantly in some pedigrees.[2,12] Neuroblastomas have been noted uncommonly to have familial occurrence,[3,5,6,8,17,18] and familial ganglioneuromas have not been reported previously. A familial distribution has been noted in long-segment Hirschsprung's disease,[14] and aganglionosis of the colon has been reported with pheochromocytomas and neurofibromas.[15] Cases of neuroblastoma and colonic aganglionosis also have been reported.[3,9] One son of our patient (case 2) died in infancy due to complications of aganglionosis of the colon.

Chatten[3] reviewed the literature in 1967, found four reports of familial occurrences of neuroblastomas, and added two additional families. One of these families was reported again by Griffin[6] in 1969. Both of the siblings in Griffin's report subsequently showed maturation of their tumors to benign ganglioneuromas. Feingold[5] reported familial neuroblastomas associated with trisomy 13. Wong[17] reported neuroblastomas in siblings whose father had occasional elevation of urinary VMA level associated with systemic symptoms. Extensive evaluation failed to reveal a neurogenic lesion in the father. Hardy[8] reported neuroblastoma in siblings and their cousin in a family having a history of other tumors occurring in infancy.

Zimmerman[17] reported the only family in which siblings and a parent have been affected by ganglioneuromas and neuroblastomas. He reported half-siblings with neuroblastomas whose common father had a mediastinal ganglioneuroma.

Although several genetic mechanisms could explain the distribution of neuroblastomas in familial cases, Zimmerman[17] suggests autosomal dominant inheritance. The much larger group of nonfamilial cases

can be explained on the basis of chance mutation to a lethal dominant gene or to a dominant gene with variable penetrance. All affected members in a family may not become clinically evident due to in-situ lesions, as reported by Beckwith,[1] or to spontaneous maturation to a subclinical benign lesion as discussed herein.

Summary

A familial occurrence of ganglioneuromas is reported. Maturation of neuroblastomas to ganglioneuromas is discussed. The possible genetic mechanisms to explain the rarity of familial occurrence are cited.

Because of the possible familial occurrences of these neurogenic lesions which are often asymptomatic, evaluation of other members of the affected family should be considered.

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Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).
Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
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Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
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USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.
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Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.
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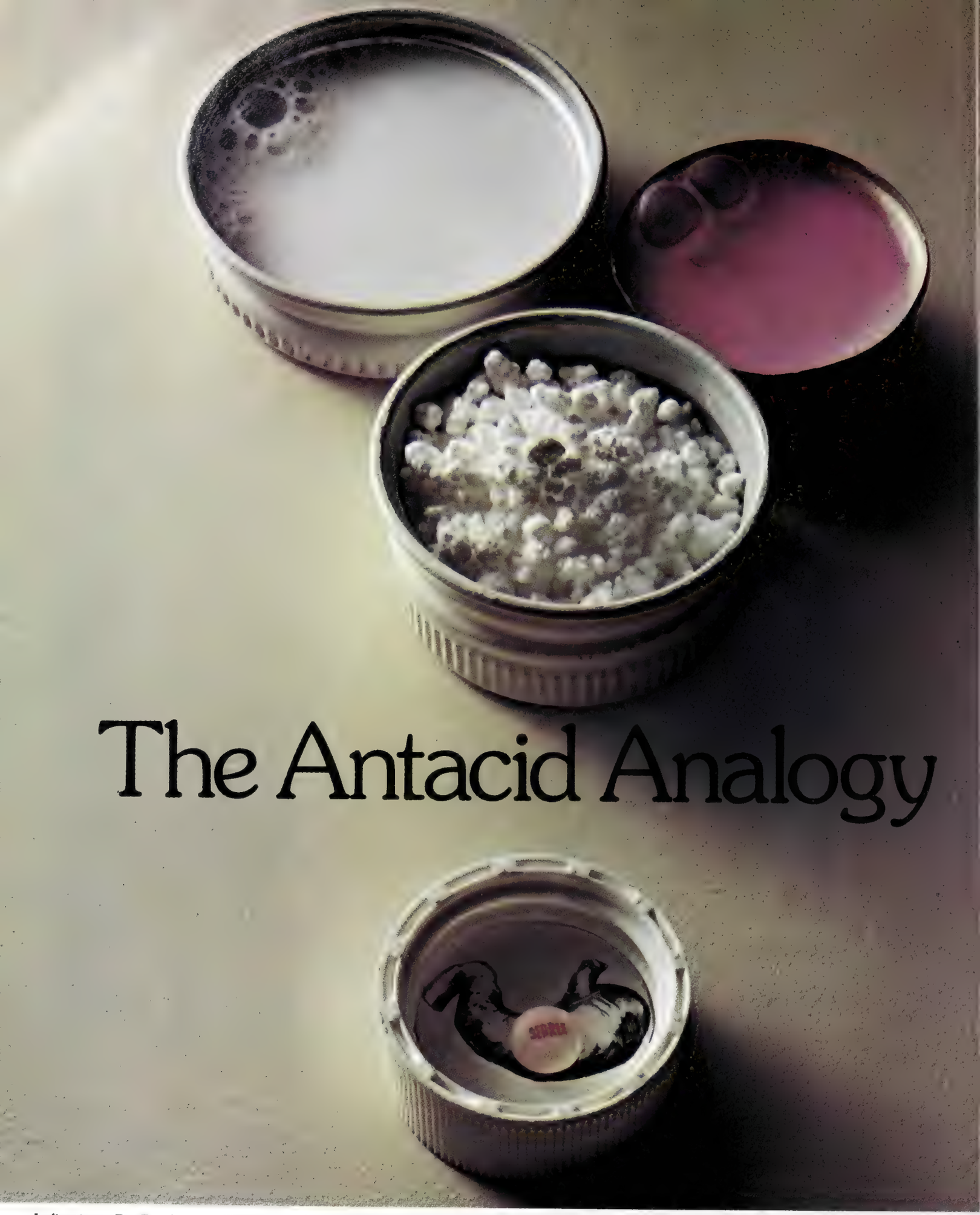

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Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

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*Innes, I. R., and Nickerson, M., in Goodman, L. S., and Gilman, A. (editors): The Pharmacological Basis of Therapeutics, ed. 4, New York, The Macmillan Company, 1970, p. 537.

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Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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Hypotonic gastrointestinal x-ray studies

Charles W. Yates, Sr., MD; Charles W. Yates, Jr., MD; James M. Keegan, MD

Pharmacologic modification of function as an aid to radiologic diagnosis and therapy has emerged as one of the exciting new areas of radiology. Examples include the use of epinephrine to demonstrate tumor vessels and the use of vasopressin to control gastrointestinal bleeding. Anticholinergic agents, because of their ability to cause transient paralysis of smooth muscle, have been used in studies of the gastrointestinal tract. The advantages and method of using such an agent (Pro-Banthine) in studies of the duodenum and colon form the basis of this report.

Until recently, one of the limiting factors in gastrointestinal examination has been physiologic peristalsis. This causes rapid movement of barium throughout the small intestine, preventing complete distention of the bowel, and thus preventing complete visualization of the mucosa.

The duodenum is a prime example of a bowel segment in which contrast agent is removed almost as fast as it is emptied from the stomach. This segment is of particular interest not only for intrinsic disease (ie, ulcer, polyp, carcinoma) (Fig 1), but also for the ability to mirror the diseases of adjacent organs.

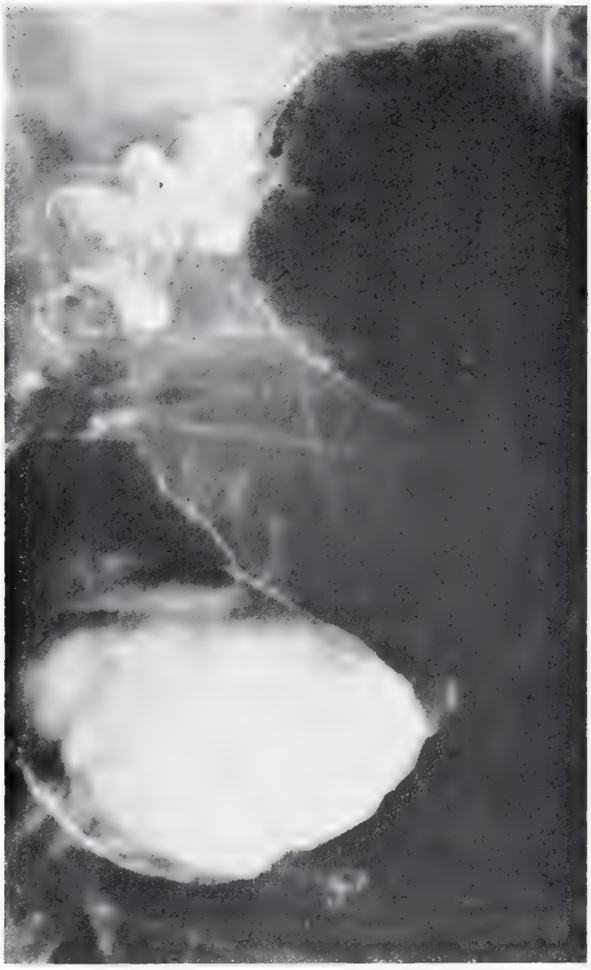
Pancreatitis, for example, can cause edema of the duodenal mucosa (Fig 2) and extrinsic pressure on the wall of the duodenum due to edema of the pancreas itself. Carcinoma of the pancreas causes spiculation in the outline of the barium-filled duodenum (Fig 3). Impaction of a gallstone, recent passage of a calculus, or cholangitis (Fig 4), may cause edematous enlargement of the ampulla. The ampulla itself is subject to intrinsic carcinoma (Fig 5) or to benign hypertrophy (Fig 6). However, the subtle changes of these diseases can be completely missed without adequate distention of the duodenum.

In the ideal examination, the radiographer desires a completely distended bowel loop. Utilization of contrast agents in an aperistaltic atmosphere would allow detailed evaluation of the ampulla and of the duodenal mucosa. Direct introduction of contrast into the duodenum would eliminate the problem of barium in the overlying stomach.

Hypotonic duodenography attempts to produce these conditions. Pro-Banthine, 30-60 mg, is used intramuscularly for its anticholinergic effect on the autonomic ganglia and on the parasympathetic affected sites. This effects transient paralysis of the duodenum, allowing complete distention by barium and air introduced through a tube placed prior to injection of Pro-Banthine (Fig 7). A special tube for this function is available commercially. Because of the necessity for tube placement, hypotonic duodenography is used as a secondary examination following routine upper gastrointestinal studies.

Anticholinergics are also effectively used to relieve spasm in examination of the obstructed sigmoid colon. Severe spasm, often associated with malignant or inflammatory disease, renders adequate diagnostic study of this area difficult to the point of being impossible. The patient may expel the barium and enema tip despite repeated efforts; if the patient does manage to retain the barium, he is frequently extremely uncomfortable and uncooperative. The Pro-Banthine appears to relieve the spasm, allowing contrast to outline the lesion in question. This significantly reduces patient discomfort while enhancing the diagnostic value of the study.

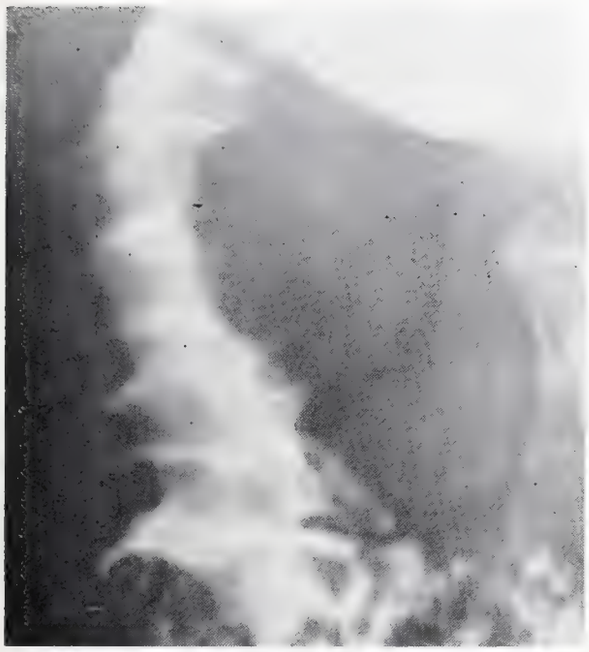
Fig 8 shows that localized spasm of the intestine can be overcome to determine the exact nature of the underlying pathological condition; comparative views of an appar-



1a. Zollinger Elllison syndrome. Post-bulbar ulcers and inflammatory strictures with dilation of noninvolved duodenum.

1c. Carcinoma of the duodenum with mucosal destruction and overhanging edges.

1b. Benign adenomatous polyp causing intussusception in the distal duodenum.

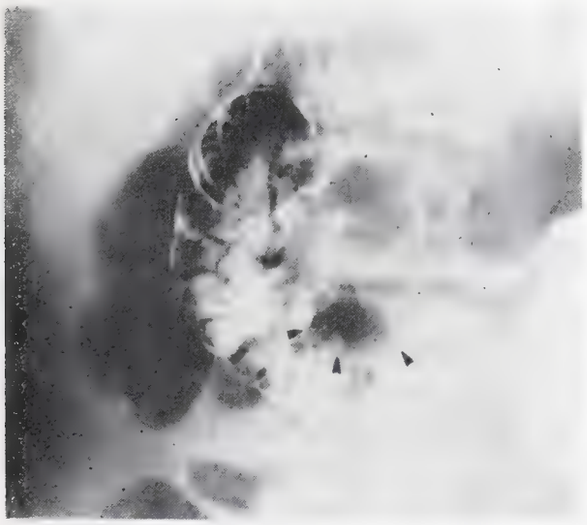


2. Chronic pancreatitis causing edematous folds in the duodenum and a smooth extrinsic defect in the wall of the duodenum.

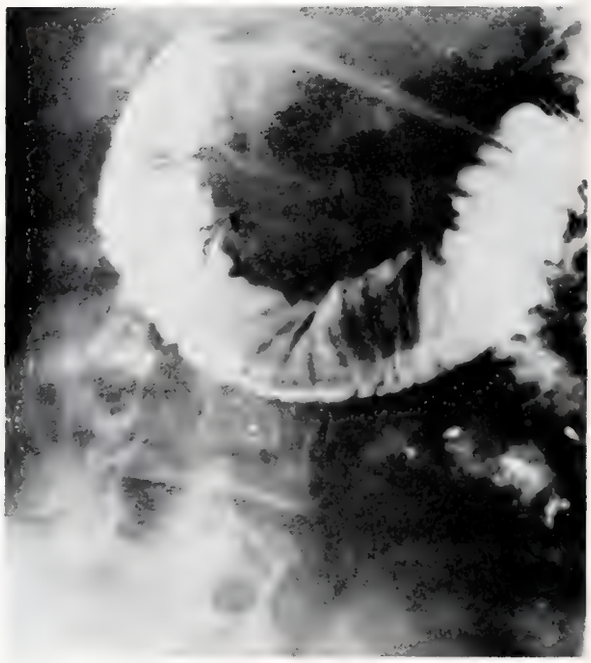
3a.

3a, b, c. Carcinoma of the pancreas invading the duodenal wall and causing spiculation of the barium column. See arrows. (Three different patients.)

3b.



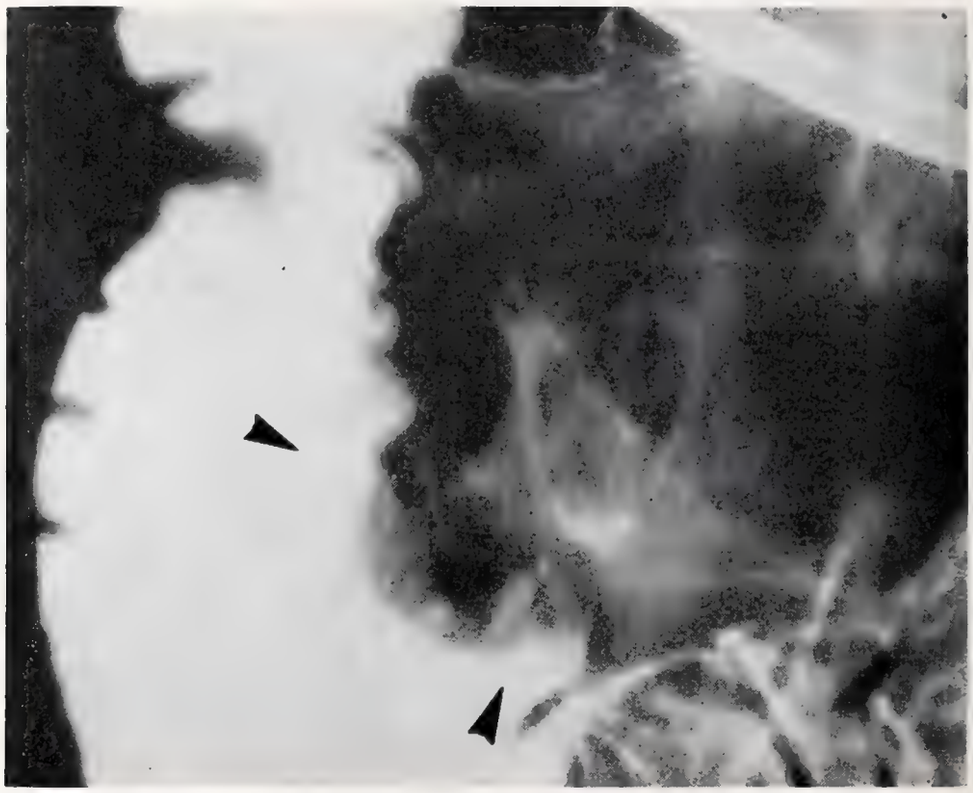
3c.



4. Enlarged ampulla of Vater following passage of a biliary calculus. See arrows.

5a. Carcinoma of the ampulla of Vater. Routine upper gastrointestinal studies reported as normal in a patient with painless jaundice.

5b. Spiculated carcinoma of the ampulla of Vater demonstrated after Pro-Banthine was injected.



ently obstructed sigmoid colon before and after Pro-Banthine administration are shown. Fig 9 demonstrates an abscess secondary to diverticulitis with comparative pre- and post-Pro-Banthine films.

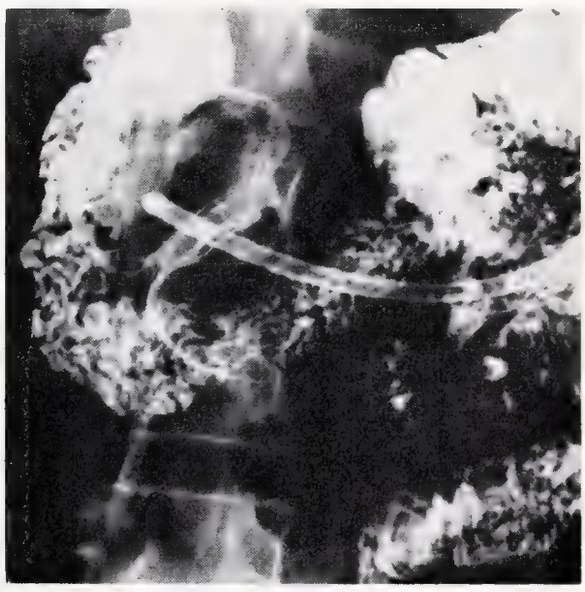
The use of Pro-Banthine does not change the radiographic criteria for diagnosis in either the duodenum or colon. Rather, it accentuates the findings and improves the ability to observe subtle changes by eliminating peristalsis and spasm Thus, in the duodenum, one looks for ulceration, spiculation and irregularity of the mucosa, mucosal edema and destruction, rigidity or extrinsic pressure. Administration of the anticholinergic drug may relieve spasm, allowing examination of both ends of a colonic lesion, and possibly providing crucial information in distinguishing between diverticulitis and carcinoma.

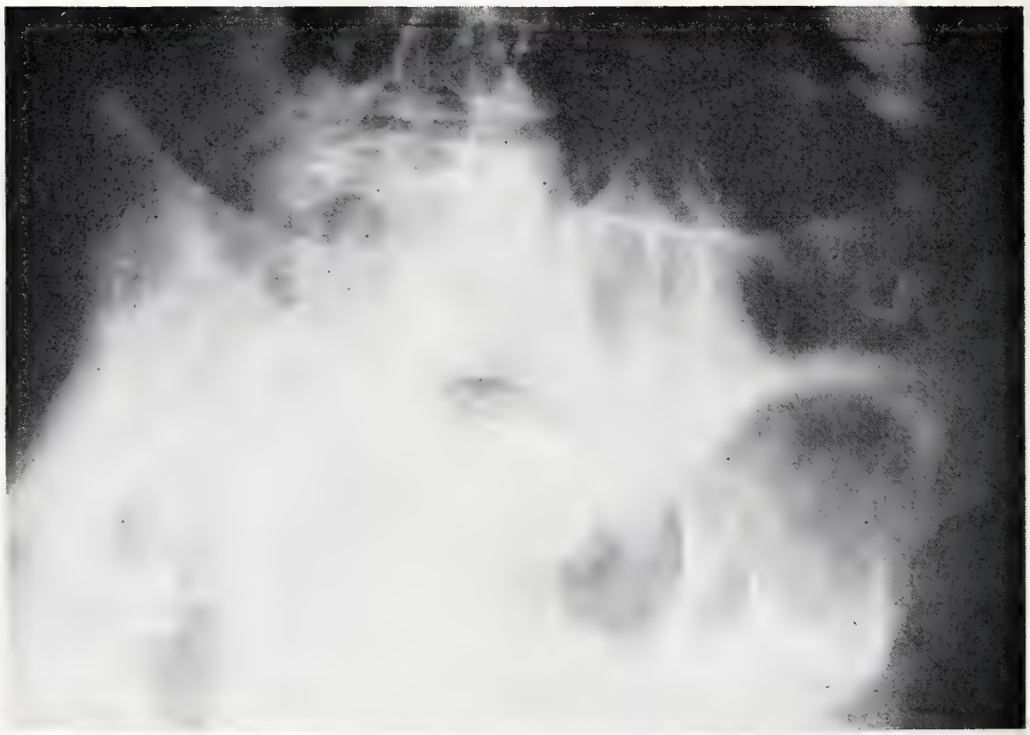
The Pro-Banthine produced satisfactory results in all patients in this study within five minutes, with the effect lasting 15-20 minutes. Thus, peristalsis is halted for a time sufficient for adequate fluoroscopic evaluation as well as for taking conventional radiographs. Actions on the eye, cardiovascular system, and urinary bladder are undesirable side effects and constitute the basis for contraindications to the use of Pro-Banthine in patients with glaucoma, cardiac arrythmias, or urinary retention (prostatism). In such cases, a similar result can be obtained with the use of glucagon. The only side effect noted in the patients in this study was transient dryness of the oral mucosa. However, this was not a major problem, and the degree of dryness gave an indication of dosage adequacy.

In conclusion, we think that there is a definite indication for the use of anticholinergic drugs to augment gastrointestinal examination, particularly when (1) disease of the biliary tree or head of pancreas is

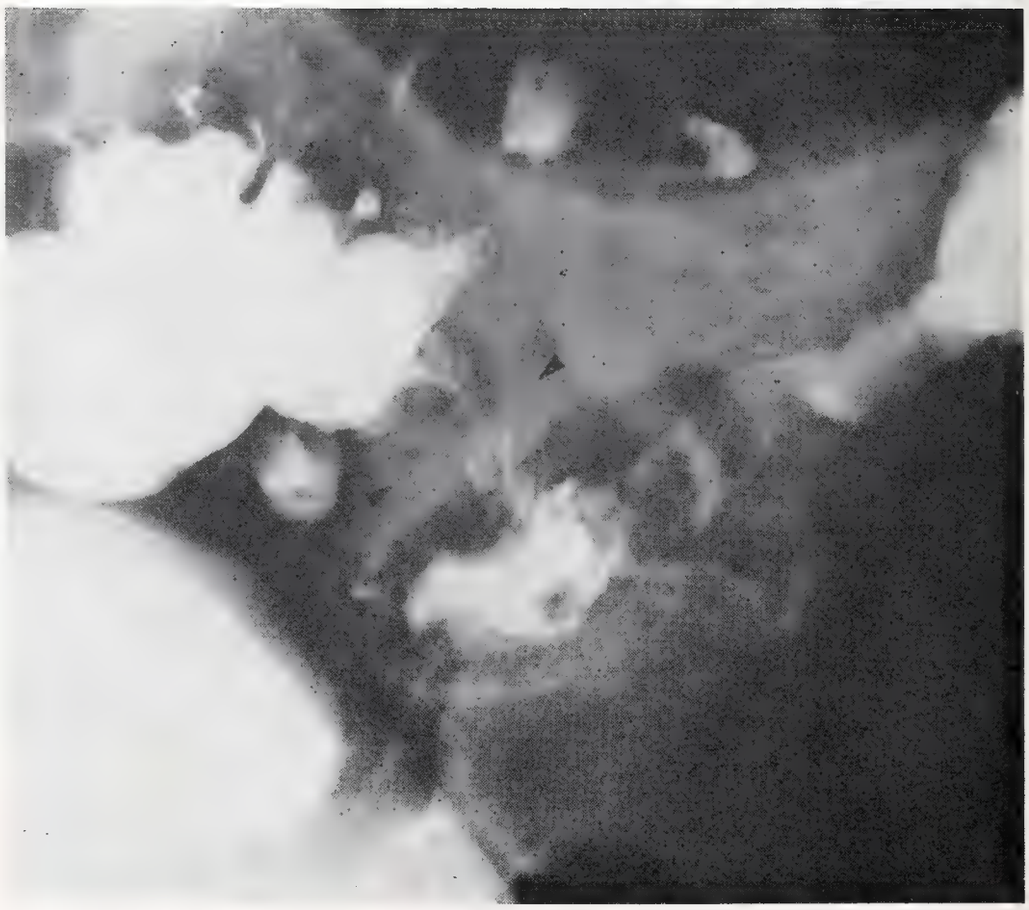
6. Benign hypertrophy of the ampulla of Vater proved by the duodenoscope.

7. Normal study. With a tube placed in the duodenum, controlled amounts of barium and air can be injected for optimal visualization of mucosal detail.





8a. Initial attempt at barium enema revealed complete obstruction in the sigmoid colon. Dilated loops of the small bowel are seen.



8b. Barium enema, five minutes after the injection of Pro-Banthine, shows barium outlining both margins of an annular carcinoma of the sigmoid colon.

suspected, but only minimal or nonspecific changes are noted in the duodenum on regular upper gastrointestinal studies that do not permit a specific diagnosis; or (2) the marked spasm often associated with neoplastic or inflammatory disease of the sigmoid colon precludes adequate routine fluoroscopic and film evaluation of the lesion.

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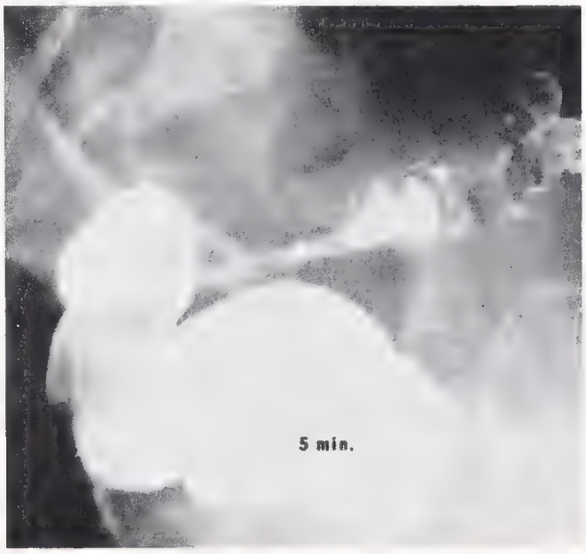
9a. Initial attempt at barium enema shows only poor filling of the lower sigmoid colon prior to expulsion of the enema tip by the patient.

9b. Barium enema five minutes after the injection of Pro-Banthine allowed good filling of the colon. The extrinsic pressure defect caused by the diverticular abscess is readily seen.



Accelerated degree programs: the deans' points of view

Nearly one-third of the US medical schools have instituted some type of accelerated degree program—JAMA.

The quality of the instructional process relies upon the competence of the instructors, not on the duration of exposure—Dr. Merrill, Baylor Med.

For several years a new concept has been receiving increased attention in the area of medical education—accelerated degree programs.

Advocated by some as a means to increase the number of graduates, the alternative continues to be the subject of much debate by concerned individuals and groups. It has been estimated that nearly one-third of the US medical schools have instituted some type of accelerated degree program. (*JAMA*, Nov 19, 1973).

A recent *Texas Medicine* survey of the deans of the Texas medical schools reveals a diversity of opinions on the accelerated plans and varying degrees of incorporation of such programs within the state's schools.

Of the six medical schools in Texas, five have formal accelerated curricula; one gives consideration to early commencement for students who elect a compact program.

Baylor College of Medicine, Houston, offers an MD degree in a minimum time of 36 months. The curriculum is divided into one-third biological sciences, one-third required clinical clerkships in medicine, pediatrics, OB-GYN, surgery, and psychiatry, and one-third electives.

Student requests

This alternate curriculum duration was first offered in 1970 in response to student requests for more effective utilization of their summer months. Dr. Joseph M. Merrill, dean, said approximately 70% of the students are following this variation in curriculum. Additionally, Baylor has a joint program with Rice University to accept nominations of carefully selected students after three years at Rice for admission to the program at Baylor.

At The University of Texas Medical Branch, Galveston, all students take the same curriculum for the first three years. Students interested in graduating in three years make application and are screened and selected by a faculty committee. Those selected complete an additional eight weeks of clinical training. In all, three-year graduates at UTMB have completed a minimum 60 weeks of basic science instruction and 66 weeks of clinical experience. For students not electing the three-year option, the fourth year is a track year permitting flexibility and individuality of curricular experience within certain guidelines.

This curriculum length was introduced in the fall of 1970. Dr. Edward N. Brandt, Jr., dean, stated that the purpose of the program was to permit the qualified and mature student with well-defined plans for postgraduate training to enter such training a year earlier. He further clarified that students who apply for the three-year graduation are selected by a committee of faculty and senior students using as criteria academic performance, maturity, and plans for training beyond the first postgraduate year. These students are required to apply for and be accepted into a university hospital postgraduate training program for the first year and as previously mentioned to complete an additional eight weeks of clinical training prior to graduation.

For 1974, 34 of 171 students were approved for three-year graduation at UTMB.

The University of Texas Medical School at Houston offers a primary curriculum based on a quarter system of 12 quarters of 11 weeks each. Quarters one and two include introductory material in anatomy, biochemistry, cellular biology, behavioral science and patient care. Quarters three, four, five, and six cover systems biology and

introduction to medicine. Quarters seven, eight, and nine are clinical clerkships. Quarters ten, eleven, and twelve are devoted to electives, largely clinical.
Houston dean, Dr. Cheves McCord Smythe, said the program, now in existence for three years, was formulated for several reasons. It shortens the length of medical education by a year. It requires less physical plant facilities than four year plans. It makes maximal use of clinical facilities.

No summer vacations

The three-year program at The University of Texas Medical School at San Antonio contains all required courses, all required clinical rotations and all senior electives as the regular four year program. However, the plan starts in July, does not allow time for elective work in the first two years, and omits summer vacations. Dr. Stanley E. Crawford, dean, said that in addition to the acceleration, the school, on occasion, has allowed other variations in curriculum. In some instances, a five-year program has been tailor made for specific students, but it is not generally available on request.
The option for a three-year program was first offered in San Antonio to the entering class of 1972. The program, Dr. Crawford stated, was based on the recognition of the fact that medical students have variable backgrounds and abilities enabling some of them to learn and mature at a faster rate than others. He said the considerations of an accelerated program is less expensive for the students and the state. It also allows them to enter practice sooner or devote time to additional postgraduate work. Four of 114 students opted for the accelerated plan the first year that it was offered; 14 of 122, the second year.
There is not a formalized three-year program at The University of Texas Southwestern Medical School, Dallas. However, by electing summer rotations, a student can condense his instructional experience into a time frame of less than four years. Dr. Frederick J. Bonte, dean, emphasized that it is an individual option which only a few students follow.
The Texas Tech University School of Medicine, Lubbock, took its first class in September 1972. They have operated with a three-year curriculum since the enrollment of the first class and have offered no alternatives to the students in terms of a less accelerated pace.
Results attributed to the three-year curriculum are also varied. Baylor has graduated 240 students from the plan and has doubled its entering class. Dr. Merrill indicated that the students continue to express a preference to have the three-year curriculum as the primary one. Some faculty members nostalgically favor a four-year traditional program. Dr. Merrill said that the quality of the student body, faculty, and the clinical resources available assure both the students and faculty that no compromise of educational opportunities has been experienced at the school.
Dr. Merrill's personal view is that the accelerated plan is a good one. "The quality of the instructional process relies upon the competence of the instructors—not on the duration of exposure."
At UTMB a full evaluation of the plan will be initiated after the first group of graduates completes their internships. Dr. Brandt said, however, that opinions thus far are generally favorable. He said that in his view, carefully selected students are quite capable of entering postgraduate training after three years of medical school. He limits his endorsement, though, to the type of program as defined and implemented by the UTMB faculty.

The four-year program will remain popular with students and faculty—Dr. Smythe, UT Houston.

It is a consensus that changing to a three-year curriculum might impair the excellent performance now given by the students as primary care and other physicians—Dr. Bonte, UT Southwestern.

Medical students have variable backgrounds and abilities enabling some of them to learn and mature at a faster rate than others—Dr. Crawford, UT San Antonio.

Balanced advantages

Dr. Smythe remained cautious in rating one plan over another. He stated that the advantages of the three-year program balance with its disadvantages and that the same was true with the four-year plan. He said that while the school, at present, plans to stay with the accelerated program, he projects that the four-year program will remain popular with students and faculty.

UT Houston will probably eventually follow the practice of other schools in offering various selections of curriculum duration. The school, which has graduated 54, has experienced difficulties coordinating examination dates at the end of preclinical training with national and state examination schedules.

Dr. Crawford said that the general feeling at this time in San Antonio is that the three-year plan is an option for gifted students. He indicated that students are free to revert to a regular program at any time if they are not satisfied with the program. Thus, only those who are happy with the program and are suitable are apt to continue in that course of study.

According to Dr. Bonte, the faculty of the school in Dallas elected not to operate a three-year curriculum because they felt it was in opposition to a number of the educational objectives formed by the departments. He further stated that students are making increased and valuable use of their free or vacation periods. This coming fall when the school reaches 200 entering students per class, a free period is due to be incorporated in a twelve-month rotational scheme for the third year. He said that it is a consensus that changing to a three-year curriculum might impair the excellent performance now given by the students as primary care and other physicians.

Pointing out that Texas Tech is not in a position to speak from long experience or with authority on three-year programs versus four, Dr. George S. Tyner, associate dean for education and student affairs, expressed the unofficial feeling that both students and faculty would prefer to go to a four-year curriculum, discontinuing the three-year plan entirely. The main reasons for this inference, Dr. Tyner said, are the absence of free time for students to pursue elective courses and for faculty to pursue other activities aside from classroom teaching. The school graduated its first class, numbering 24, this past March 31.

In general, the schools report no perceptible change in the attitude, grades or future ambitions of the students as a result of any variable in curriculum length. The schools do indicate a ground swell of interest in the primary health care areas but find this to be unrelated to the duration of curriculum.

Future trends

What, if any, conclusions can be drawn? Each medical educator questioned foresees the four-year program as retaining its stronghold. Several indicate, however, that they believe there is a trend toward shortening the total post-high school educational period for certain students of medicine. The improvements in high school and university education during the last several decades and the increased opportunities for primary care residencies and post-graduate education support the hypothesis that accelerated programs will continue to exist as a viable alternative for a minority of medical students.

Current TMA policy: medical guidelines for abortion

Editor's note: To serve the interests of the state's physicians, *Texas Medicine* will, from time to time, publish the policies and positions of the Texas Medical Association on current issues affecting the health care of Texans. The following medical guidelines for abortion, prepared by the Committee on Maternal Health, were approved by the House of Delegates during Annual Session in Houston in May.

General principles

A. Unwanted pregnancy should and can be avoided in most circumstances. Education in human sexuality; safe, effective, and inexpensive contraceptives; and sterilization must be available readily for all citizens. Alternatives to abortion should be offered to individuals with unwanted pregnancy and these options should be made feasible for them.

B. Patients should have access to the health care necessary for a legal abortion to be carried out under optimum conditions. This should include:

1. Early and accurate diagnosis of pregnancy
2. Informed and non-judgmental counseling
3. Prompt referral
4. Skillful and understanding personnel working in a good facility
5. Reasonable cost
6. Professional followup

C. It is clear that the safety of induced abortion is dependent upon the duration of the pregnancy at the time the abortion is performed, the ability of the person doing the abortion, the general health of the patient, and the facility in which the procedure is done. These guidelines attempt to identify the measures needed to make induced abortion as safe as possible.

Specific standards of care

A. Patient Evaluation—A pre-abortion history and physical examination should be done and recorded. This should be of sufficient detail to evaluate the general health of the patient; detect medical, allergic, and surgical conditions which might result in complications; and make a positive diagnosis of pregnancy. The duration of the gestation by both uterine size and menstrual dates must be determined. An accurate pregnancy test is necessary prior to that time when the pelvic examination is characteristic. In addition, each patient should have an STS, hemoglobin or hematocrit and an Rh factor determination. Other laboratory procedures which may be useful are gonorrhea cultures of the cervix and anus, serologic determination of rubella immunity, urinalysis and a cytologic examination for cancer.

B. Counseling—The counseling of patients with unwanted pregnancy is aimed toward assisting them in making decisions concerning the pregnancy and helping them carry out these decisions. Psychiatric and psychological consultation should be reserved for those patients who would benefit from such consultations. Counseling should be carried out in a manner which is non-judgmental, professional and accurate. Information covered in counseling patients electing abortion should include relevant reproductive physiology, technical procedures to be employed, risks to the patient, probable charges, post-abortion phenomena, and family planning.

C. Operator—Abortion should be performed only by licensed physicians who have received training in the procedures that they will perform.

D. Location—Uncomplicated pregnancies in the first trimester may be terminated in a hospital operating room or in an outpa-

tient facility which has been specifically prepared for ambulatory surgical procedures. First trimester pregnancies with complications and pregnancies past 12 weeks by menstrual dates should be terminated in a hospital environment. Abortions with sterilizing operations should also be done within a hospital.

E. Consents—Written and informed consents are valid when given by:

1. Any married woman (Consent of husband should be obtained when possible)
2. Any single woman 18 years of age or over
3. Any single woman under the age of 18 whose parent or guardian also consents

F. Consultation—When abortion is recommended by a physician, the indication for the procedure should be clearly stated and should be approved by a consultant knowledgeable in regard to the condition thought to indicate abortion.

G. Procedure—Suction curettage appears to be accompanied by fewer complications than any other procedure. Instillation of abortifacients performed between the 15th and 20th week is associated with fewer complications than hysterotomy or hysterectomy.

H. Facilities—The room in which the abortion is to be done, whether as an inpatient or an outpatient, should contain an operating table (or usual gynecologic table) equipped with the necessary stirrups, lights, etc. The room should be clean, well-ventilated, and ample in size. It should meet those standards the Texas State Department of Health requires for any surgical facility. There should be appropriate instruments for a D & C and suction curettage, and facilities for the cleaning and sterilization of these instruments should be available. Emergency drugs, intravenous fluids and plasma expanders should be immediately available. Rh immunogen should be available and given to appropriate Rh negative patients. Equipment and oxygen necessary for resuscitation and artificial ventilation should be immediately available. In rooms in which general anesthesia is to be used, all necessary equipment should be present in the room and personnel administering the anesthesia should be trained to do so.

I. Post-Operative Care—Specific plans should be made for the diagnosis and treatment of complications. If the procedure room is not located within a hospital, arrangements with a nearby hospital (15 minutes) must have been made beforehand to accept immediately such patients on transfer. This hospital should have an operating room and be capable of doing emergency procedures.

There must be space adjacent to the abortion procedure room for post-operative observation. Post-operatively, the patient's blood pressure, pulse, temperature and respirations should be taken and recorded until stabilized and there is no excessive vaginal bleeding or abdominal pain. Prior to discharge, the patient should be fully able to care for herself. Often it is not advisable that such patients drive, and under those circumstances, they should be accompanied by someone who can drive them home. Specific post-operative instructions, including the need for a post-operative examination should be given to patients and they should know how they can obtain 24-hour emergency care if it should become necessary.

J. Tissue Examination—All tissue recovered should be examined grossly for the presence of placental and fetal structures. When these are not present, the tissues should be sent to the pathologist and examined histologically. Abnormal tissue recovered should have appropriate follow-up. Gross observation of tissue recovered by suction curettage is best done by floating it in normal saline solution.

LEGAL PROTECTION: FACTS YOU SHOULD KNOW

Sam V. Stone, Jr.
TMA Office of General Counsel

DISCONTINUING PRACTICE

Physicians may find it necessary to discontinue their medical practice for any number of reasons such as age, illness, change in specialty, or change in location of practice. When these events occur, and it becomes necessary to notify patients of the physician's discontinuance of practice, the physician must realize that he will not only be closing down an office, disposing of equipment, providing for transfer or storage of records, and other obvious tasks, but he will also be terminating the physician-patient relationship existing between him and all of his patients.

Improper or ineffective termination of this relationship may subject the physician to allegations of abandonment in malpractice cases should the patients not be properly informed of the physician's discontinuance of his medical practice.

Of course, the patient may be notified that the physician's office is closing by the receipt of an actual notice or be adjudged to have received constructive notice, but the physician is well advised to take every reasonable step available to notify his active patients of the following:

1. That he is discontinuing his medical practice on a specific date;
2. That the patient should make arrangements to secure the services of another physician; and
3. That the patient records maintained by the physician *may* be made available to the patient's new physician under certain specific circumstances, though care should be taken that no inference is communicated that the *patient* has a right to possession of the records.

While oral notification and public announcement in the newspaper may properly be utilized, *written notice* to each of the physician's active patients should also be made.

In addition, the physician who is discontinuing his medical practice should protect himself by insuring that the medical records transferred will always be available to him should he need such records, or, in the alternative, if the records are to be copied or reproduced, that the cost for such reproduction will be borne by the patient or the new physician, should the physician discontinuing practice wish to make such a charge.

The following letter may be used as a model for physicians who are discontinuing practice.

Dear Mr._____:

Please be advised that because of_____

_____

(my retirement, reasons of health, etc.)

I am discontinuing the practice of medicine on _____, 19_____. I shall not be able to attend you professionally after that date.

I suggest that you arrange to place yourself under the care of another physician. If you are not acquainted with another physician, I suggest that you contact my office, or Dr._____, or the _____ Medical Society.

(local)

I shall make my records of your case available to the physician you designate. Since the records of your case are confidential, I shall require your written authorization to make them available to another physician. For this reason, I am including at the end of this letter an authorization form. Please complete the form and return it to me.

I am sorry that I cannot continue as your physician. I extend to you my best wishes for your future health and happiness.

Yours very truly,

_____, M.D.

AUTHORIZATION TO TRANSFER RECORDS

Date:_____

To:_____, M.D.

I hereby authorize you to transfer or make available to _____, M.D., _____, all the

(Address)

records and reports relating to my case.

Signed_____

If a charge is to be made for reproducing the records, the following sentence may be added to the authorization to transfer records:

"I further understand that I will be responsible for the clerical and reproducing costs incurred in the copying and/or transfer of my records to the above named physician, should that physician request such records."

MEDICINE AND THE LAW

INFORMED CONSENT—TEXAS SUPREME COURT UPDATE

In an opinion delivered on May 22, 1974, the Supreme Court of Texas upheld the lower court in a case styled *Gaut v. Quast et al,* in which the plaintiff had sought to overturn the trial court judgment because the judge had refused to submit to the jury a special issue on fraud of the physicians as an independent ground of recovery from informed consent. The plaintiff asserted that there was intentional misrepresentation by the physicians as to the results of preliminary tests conducted on the patient prior to surgery.

The suit involved the treatment of the plaintiff who had entered the hospital for diagnosis and treatment of nausea, vomiting, and back pains. After a physical examination and a series of tests, including gastrointestinal x-ray, the two defendant physicians made a diagnosis of "possible malignant stomach tumor." They informed the plaintiff of their tentative diagnosis and obtained his consent to perform exploratory surgery. When the operation was performed, the stomach abnormality noted in the x-rays was discovered only to be unusually large rugae. There was no tumor or malignancy.

The plaintiff brought suit on a theory of lack of informed consent. The trial court submitted the following special issue:

> Do you find from a preponderance of the evidence that the defendants failed to obtain the informed consent of George R. Gaut for the surgery performed on April 11, 1968?
>
> "Informed consent," as used in the foregoing issue, means the furnishing by the doctor to the patient sufficient information about the nature of the illness, and the results of the tests and examinations made by the physician or surgeon, or others, in connection with the diagnosis of such illness, and of the risks and complications, if any, which might be involved in the patient's refusing or accepting proposed medical treatment or surgery, to enable the patient to make a knowledgeable, intelligent and informed consent to submit to surgery or to refuse surgery.

The jury answered the special issue in favor of the doctor and on the basis of this answer to the issue of informed consent, the trial court entered a take nothing judgment against the plaintiff.

The question before both the Court of Civil Appeals and the Supreme Court was whether or not the trial court's refusal to submit the plaintiff's requested issue on intentional misrepresentation was in error. The Court of Civil Appeals held that the issue of informed consent could have supported submission of an issue on exemplary damages. The Supreme Court disagreed with the Court of Civil Appeals on this statement of the law. The Supreme Court opinion holds:

> An affirmative answer to the submitted issue of informed consent, standing alone, would not constitute a finding or findings sufficient to justify exemplary damages. For example, there is no finding that there was a false representation willfully made, or made recklessly without any knowledge of its truth as a positive assertion. (The court cited several cases at this point).
>
> However, the trial court's refusal to submit petitioner's requested issue on intentional misrepresentation is not error,

as we can find no evidence in the record of any purposeful intent by the defendants to mislead Mr. Gaut. The doctors testified that they believed Gaut had a stomach tumor, possibly cancerous. Gaut's recollection was almost exactly the same—the doctors told him he had a tumor which was possibly malignant.

Such testimony fails to show any evidence of the doctors' previous knowledge of their erroneous diagnosis or of their intentional misrepresentation of his condition. Consequently, the trial court was correct in refusing to submit the issues of intentional misrepresentation and exemplary damages.

The importance of the physicians' complete candor and refusal to misrepresent any fact to the patient is pointed up by this decision. Had there been any convincing testimony that the physicians had been less than honest and candid with the patient, the court might well have reversed the case and ordered the trial court to submit an issue on misrepresentation to the jury on a retrial. The plaintiff had originally pleaded that his cause of action was based upon a failure of informed consent, fraud, assault and battery, negligence, and gross negligence.

At trial, the plaintiff testified that the physicians had informed him that "all four of the tests" had confirmed that he had cancer. He also stated that their diagnosis "as reported to him was a 100% certainty of cancer and that he would never have consented to surgery but for their absolute certainty."

The two doctors testified that they had correctly reported the results of the tests to the plaintiff, stating that, while the x-ray indicated a possible tumor the other facts were inconclusive as to the existence of a tumor. The doctors testified that their diagnosis, as reported to the appellant, was that there was some indication of a possible tumor in the stomach which could only be confirmed or rejected through surgery.

The jury believed the physicians' testimony and found in answer to the issue of informed consent that the defendant doctors had not failed to obtain the proper informed consent of the patient.

This case, along with other Texas cases on the duty of the physician to secure informed consent, points up the importance of the physician himself openly and frankly discussing the medical condition with the patient and providing the patient with "sufficient information about the nature of the illness, and the results of the tests and examinations made by the physician or surgeon, or others, in connection with the diagnosis of such illness, and of the risks and complications, if any, which might be involved in the patient's refusing or accepting proposed medical treatment or surgery, to enable the patient to make a knowledgeable, intelligent and informed consent to submit to surgery or to refuse surgery."

TMA Office of General Counsel
Sam V. Stone Jr.

Medical Newsmakers

Dr. Coggeshall

Dr. Stubbs

Dr. Rodin

Dr. Simon

Classes at The University of Texas Medical Branch have selected four faculty members as outstanding educators. DR. RICHARD E COGGESHALL, professor of anatomy and chief of the ultrastructure section of the Marine Biomedical Institute, and DR. DONALD W STUBBS, associate professor in the department of physiology, were co-recipients of the Jimmy Doyle Dickins Memorial Faculty Award. DR. ALVIN E RODIN, professor in the department of pathology, was selected as the recipient of the Golden Apple Award, presented annually to a pre-clinical instructor. DR. JIMMY L SIMON, former professor in the department of pediatrics, was selected by the senior class to receive the James W Powers Memorial Faculty Award.

Three physicians have been honored by The University of Texas Medical Branch. Receiving the 1974 Ashbel Smith Distinguished Alumni Awards were DR. JULIA M BAKER, pediatrician and allergist in Mexico City, Mexico, DR. M T JENKINS, professor and chairman of the Department of Anesthesiology at The University of Texas Southwestern Medical School, Dallas, and DR. NICHOLAS CARR HIGHTOWER, director, division of research and education, Scott and White Memorial Hospital, Temple.

Distinguished psychiatrist and civic leader DR. HAMILTON FAITH FORD has been named Ashbel Smith Professor at The University of Texas Medical Branch. The professorship is awarded to those faculty members who have demonstrated a long term distinguished and unselfish dedication to the Medical Branch.

Over 1,000 persons attended a reception honoring DR. T L FAHRING and his family in Anahuac May 26. The family practitioner and his father before him have served the community for more than 70 years. Gifts were presented to the Fahrings in recognition of the many contributions the family has made to the growth of medical services in Chambers County.

A new permanent equipment fund honoring DR. MARGARET WATKINS has been established with the Dallas Society for Crippled Children. Proceeds from the fund will be used to purchase small equipment such as standing tables, therapeutic tricycles and walkers for needy children. Dr. Watkins, long-time volunteer medical director of the Dallas Society for Crippled Children's Treatment Center, began the first clinic devoted exclusively to Texas cerebral palsied children in 1947. In addition to developing other such clinics throughout the state, she has maintained an active practice in orthopedic surgery in Dallas. Recently, she retired to devote full time to her duties as the Society's volunteer medical director.

DR. A L NELSON, Nacogdoches family physician, was recognized as the outstanding forestry conservationist in Texas for 1973 by the Texas Forest Association. Dr. Nelson's citation was engraved on a silver tray and presented to him by Ed Wagoner, executive director of the Texas Forest Association.

Friends and supporters of DR. J C CLEMENT, SR, of Lufkin gathered together May 25 to honor him for his many years of medical and surgical service to the residents of Lufkin. An afternoon reception and evening dinner were among the festivities planned for the day. The speaker for the dinner was Dr. James Sammons of Chicago, executive vice president designate of the American Medical Association.

The HERMAN BARNETT Memorial Awards were presented for the first time this year at the Honors and Awards Convocation of The University of Texas Medical Branch at Galveston. The awards were established by friends of Dr. Barnett, the first black graduate of UTMB, who died in a plane crash in 1973. The memorial award will be presented annually to at least six graduating medical students based on their scholarly performance in undergraduate preparation and demonstration of a proficiency for the understanding of the chemical and physiologic alterations in patients in the fields of anesthesiology and surgery.

DR. LAURENCE E EARLEY has been named president-elect of the American Society for Clinical Investigation. Dr. Earley is professor and chairman of the department of medicine at The University of Texas Health Science Center at San Antonio.

Newly-elected to the board of directors of American National Insurance Company is DR. W L MARR, III. Dr. Marr has served American National as medical director since August, 1973, and is a member of the staff of The University of Texas Medical Branch at Galveston.

DR. WILLIAM C LEVIN, incoming president of The University of Texas Medical Branch at Galveston, has been named the new chairman of the cancer clinical investigation review committee of the National Cancer Institute, National Institutes of Health. Dr. Levin's chairmanship will begin July 1 and extend to June 30, 1977. He is also a member of the scientific advisory committee of the American Association of Blood Banks; a member of the editorial board of the *American Journal of Medical Sciences;* and a member of the editcrial advisory board of the *American Family Physician.*

Questions/Answers

Q May a Texas physician, clinic, or hospital, either private or governmental, hire a non-licensed graduate physician, either foreign or US trained, to work as a physician's assistant?

A According to Dr. A. Bryan Spires, Jr., secretary of the Texas State Board of Medical Examiners, there has been no legislation in Texas relating to physician's assistants, either certification or licensure, to date. With no legislation, as is the present case in Texas, any physician may use a physician's assistant as he sees fit so long as he retains control and supervision of such an assistant.
Since the physician's assistant is not licensed to treat or diagnose illness, injury, or disease, he is not licensed to practice medicine in the State of Texas as that term is defined in Article 4510, Revised Civil Statutes of Texas. Only a licensed physician is authorized under the Texas Medical Practice Act to render medical care, and all those employed by the physician must be under his control and supervision lest the physician be subject to a charge of aiding and abetting the unlicensed practice of medicine. The employing physician, of course, remains legally liable for the acts of those who are working under him and should exercise great caution in the employing of assistants and in their training. A physician's assistant should not be allowed to exercise his independent judgment, write prescriptions or orders, or in any other way go beyond the scope of a nurse or other such person who may be employed in a physician's office.

Medicine in literature

The Persecuted Drug: The Story of DMSO
Pat McGrady, Sr, Garden City, NY, Doubleday & Co Inc, 1973, $7.95.

Concern has been expressed recently regarding the retardation in the introduction of new drugs in the USA. Despite the expenditure of vast sums in medical research the productiveness of these expenditures has been questioned. Insofar as new drugs are concerned the question has been raised as to whether the bureaucracy of the Food and Drug Administration is doing the consumer a disservice by retarding the availability of useful therapeutic agents rather than serving its primary role of protecting the public against fraud and the use of ineffective or harmful agents. Has a bureau set up to regulate industry taken over powers beyond its competence? Is it keeping from the physician drugs of potential usefulness?

It is to these problems that the volume under review has been directed. The author, a science reporter, was assigned by his editor, to write "a nice, simple, straightforward book about a strange chemical called DMSO." The author, it was thought, would be free of any scientific bias and having not been involved in the controversy associated with the medical use of this drug (dimethyl sulfoxide) since its introduction in 1961.

In a well-written, straight-forward manner, the author has reviewed the controversy associated with the attempted introduction of DMSO into medical practice. As might be expected it was impossible for the author, as non-scientist, to judge critically the evidence and the reader is still left with the necessity of reading the original reports and drawing his own conclusions regarding the therapeutic efficacy of DMSO. In spite of this, the book will prove of interest to the reader for an interesting survey of the vicissitudes a drug must undergo before it can become available to the public.

This book will be read with pleasure by the physician to whom science-fiction appeals; it will not allow him, however, to judge whether DMSO is a useful drug or not, and whether it should be made available to the public. Should it ultimately prove useful, the Food and Drug Administration will be criticized for delaying its marketing; should it be released and, like thalidomide, ultimately prove harmful, the agency will be condemned for its action. Only by a critical experimental evaluation can the desirability of releasing the drug be determined. A survey of claims even by the most unbiased layman, cannot be depended upon to give us the true and dependable evaluation.

ARTHUR GROLLMAN, PhD, MD
Dallas

IN THE TMA LIBRARY

Robinson Corinne H: *Normal and Therapeutic Nutrition,* ed 14, New York,, Macmillan, 1972

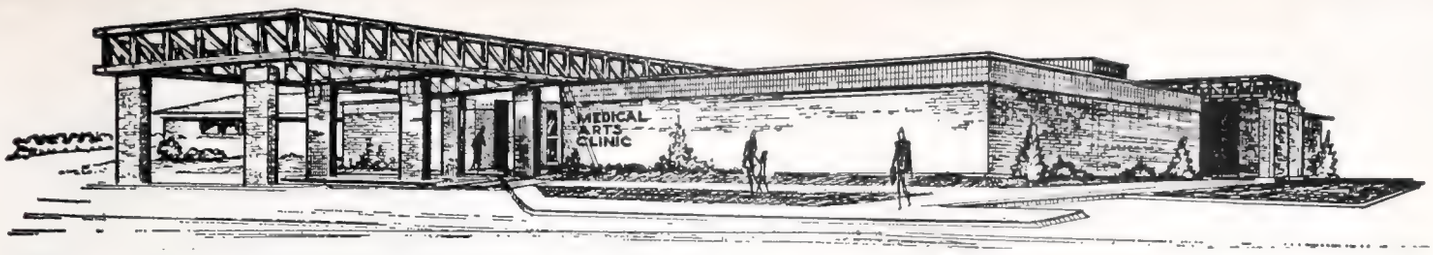
Salmon Margaret B, Quigley Althea E (eds): *Enjoying Your Restricted Diet,* Springfield, CC Thomas, 1972

Shneour Elie A: *The Malnourished Mind,* New York, Anchor Press/Doubleday, 1974

Stiehm E Richard, Fulginiti Vincent A: *Immunologic Disorders in Infants and Children,* Philadelphia, WB Saunders Co, 1973

Trimble Vance H: *The Uncertain Miracle: Hyperbaric Oxygenation,* New York, Doubleday, 1974

Tumulty Philip A: *The Effective Clinician,* Philadelphia, WB Saunders Co, 1973



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RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

G P Bain
Temple, 1919-1974

C D Wilson
Wichita Falls, 1912-1974

F W Horn
Dallas, 1891-1974

L R D Montemayor
San Antonio, 1938-1974

J T Mills
Dallas, 1900-1974

C C Jowell
Cleburne, 1896-1974

P C Oglesby
San Antonio, 1921-1974

P M Wolff
Dallas, 1885-1974

H E Alexander, Jr
Beaumont, 1931-1974

F H Lancaster
Houston, 1892-1974

F O Barrett
El Paso, 1885-1974

W D Chalmers
Fort Worth, 1932-1974

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

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Recent deaths

Dr. G P Bain

Dr. George Piner Bain, Temple internist, died Jan 31, 1974, when a ladder he was climbing collapsed outside his home. The 54-year-old physician had practiced in Temple since 1946. His death occurred on the 20th anniversary of his appointment as medical director and chief of staff at Santa Fe Memorial Hospital, Temple.

A graduate of Texas Tech University, Lubbock, Dr. Bain received an MD degree from The University of Texas Medical Branch, Galveston. He completed an internship at Harris Hospital, Fort Worth, and a residency in internal medicine at Scott and White Memorial Hospital, Temple, prior to establishing his practice in Temple.

Dr. Bain was a member of Bell County Medical Society, American Geriatrics Society, American Society of Internal Medicine, American Association of Railway Surgeons, Texas Medical Association, and American Medical Association.

The physician is survived by his father, Frank P. Bain, Plainview; sister, Mrs. Jack Helms, Lubbock; and two nephews, Dr. William R Helms, Abilene, and Lee Bain Helms, Lubbock.

Dr. C D Wilson

Dr. Claude David Wilson, Wichita Falls radiologist since 1947, died Mar 1, 1974, at the age of 61 years.

Born in Belton, Tex, Dr. Wilson was graduated from Hardin-Simmons University, Abilene, with an AB degree. He received his MD degree from The University of Texas Medical Branch at Galveston and interned at Scott and White Memorial Hospital, Temple. Following a residency at the University of Michigan Affiliated Hospitals, Dr. Wilson was an instructor in radiology at the University of Michigan Medical School. He served as a major in the US Army from 1941 to 1946, and upon release established his practice in radiology in Wichita Falls.

Dr. Wilson was a fellow of American College of Radiology and member of Texas Radiological Society, Radiological Society of North America, Wichita County Medical Society, Texas Medical Association, and American Medical Association. He was certified by American Board of Radiology in 1942.

Survivors include his wife, Eunice L Wilson, Wichita Falls; son, Capt John R Wilson, Ft Benning, Ga; daughter, Mila Jane Wilson, Wichita Falls; two brothers; two sisters; and one granddaughter.

Dr. Bain

Dr. Wilson

Dr. F W Horn

Dr. Frederick W Horn died Feb 27, 1974. The family physician had practiced in Dallas since 1942.

Born in 1891, Dr. Horn was graduated from Fort Worth School of Medicine, Fort Worth, in 1915. He interned at Dr. Harris' Sanitarium, Fort Worth, and practiced medicine in Corsicana, Wortham, and Grand Prairie before moving to Dallas in 1942. He was semi-retired in 1970.

Elected to honorary membership in Texas Medical Association in 1965, Dr. Horn was also a member of Dallas County Medical Society and American Medical Association.

He is survived by his wife, Alta Edwards Horn; daughter, Mrs. Frances Wood; two grandsons, Fred and Mark Wood; great-granddaughter, Leslie Wood, all of Dallas; and two sisters.

Dr. Horn

Dr. Montemayor

Dr. Jowell

Dr. L R D Montemayor

Dr. Luis Rey DeAnda Montemayor, San Antonio pediatrician, died Jan 9, 1974. Acute bronchial asthma caused the death of the 35-year-old physician.

A native of Mexico, Dr. Montemayor was graduated with an MD degree from Facultad de Medicina de la Universidad de Nuevo Leon Monterrey, Nuevo Leon, Mexico. He completed an internship and residencies in radiology, pathology, and pediatrics at Robert B. Green Hospital, San Antonio, prior to establishing his practice in San Antonio.

Dr. Montemayor was a member of Texas Medical Association, American Medical Association, Bexar County Medical Society, and San Antonio Pediatric Society.

He is survived by his wife, Otilia Lopez Montemayor, San Antonio; mother, Mrs. Elsa Montemayor; two brothers; and two sisters; all of Monterrey, Mexico.

Dr. J T Mills

Dr. James Theodore Mills, former head of Baylor University Medical Center's department of plastic surgery, died Jan 14, 1974, in a Dallas hospital.

Dr. Mills was graduated from the University of Minnesota Medical School, Minneapolis, and interned at Washington Blvd Hospital, Chicago. In 1925, he began seven years of training with plastic surgeon, Dr. Ferris Smith, in Grand Rapids, Mich. He moved to Dallas in 1932, and was one of two physicians to pioneer plastic surgery in the southwest. During World War II, Dr. Mills and a Houston physician established one of the Navy's largest plastic surgery units, for which he received the Navy Commendation Medal for meritorious wartime service.

Dr. Mills served as president of American Association of Plastic Surgeons and American Society of Plastic and Reconstructive Surgeons. He was a clinical professor at The University of Texas Southwestern Medical School at Dallas, and served as chairman of the American Board of Plastic Surgery. He was also a member of Dallas County Medical Society, Texas Medical Association, and American Medical Association.

Survivors include his wife, Rosemary Zonne Mills, Dallas; one son, James Theodore Mills, Jr, Weatherford; three daughters, Mrs. Hildegarde Fullinwider, Dallas; Mrs. Diana Blackburn, Rayle, Ga, and Mrs. Rosemary Coats, Dallas; two brothers; one sister; and 11 grandchildren.

Dr. C C Jowell

Dr. Charlie Clinton Jowell died Jan 2, 1974. He had been a family physician in Cleburne for over 50 years.

Dr. Jowell received an MD degree from Baylor College of Medicine, then located in Dallas, and completed an internship as well as one year as house surgeon at Harris Hospital, Fort Worth. He moved to Cleburne in 1933 and remained active in his practice until his retirement in 1971.

Dr. Jowell served as secretary for Johnson County Medical Society for several years, and was an honorary member of Texas Medical Association. He was also a member of the Board of Harris College of Nursing, Texas Christian University, Fort Worth, at the time of his death.

He is survived by his wife, Mrs. Willye Stephens Jowell, Cleburne; two brothers; and six sisters.

Dr. P C Oglesby

Dr. Paul Clarence Oglesby, San Antonio family physician and surgeon, died Feb 7, 1974, while undergoing treatment in the New England Baptist Hospital, Boston. Cause of death was terminal liver disease.

Dr. Oglesby was graduated from The University of Texas Southwestern Medical School of Dallas in 1945 and completed an internship at Fort Worth City and County Hospital. Upon completion of internship, Dr. Oglesby began his practice of medicine in Corpus Christi, remaining there until called on active duty in the US Army in 1952. He served as medical commander of the US Armed Forces in Korea, 1952-1954, at which time he was returned to the United States and retired due to medical disability. Upon retirement from the US Army, he established a private practice in San Antonio, where he remained until his death.

Dr. Oglesby was a member of the Bexar County Medical Society, Texas Medical Association, and American Medical Association and an honorary member of the Korean Medical Association.

He is survived by his wife, Rena Pierce Oglesby, San Antonio; two sons, Paul C Oglesby, Jr, Devine, and Lloyd Woodruff, Austin; two daughters, Mrs. Carol Corris, San Antonio, and Mrs. Donna Kothas, Rising Sun, Md; one brother, William E Oglesby, Del Rio; and one sister, Mrs. Jewel Wike, Overland, Mo.

Dr. P M Wolff

Dr. Paul Moritz Wolff, retired Dallas physician, died Feb 20, 1974. The 88-year-old former obstetrician-gynecologist had practiced in Dallas for 34 years.

Born in Darmstadt, Germany, Dr. Wolff earned his MD degree from Medizinische Fakultat der Universitat Heidelberg, Heidelberg, Baden-Wurttemberg, Germany. He served in the medical corps of the German army during World War I, and practiced in Darmstadt, Germany, from 1919 to 1936, when he moved to Dallas.

Dr. Wolff was a member of Texas Medical Association, American Medical Association, and Dallas County Medical Society.

He is survived by his wife, Gretel Wolff, Dallas; son, Helmuto Wolff, Dallas; daughter, Marianne Schwartzenberger, San Francisco; and four grandchildren.

Dr. H E Alexander, Jr

Dr. Hugh Elbert Alexander, Jr, Beaumont orthopedist, died Feb 20, 1974, in St Elizabeth Hospital, Beaumont. Carcinoma of the liver caused the death of the 42-year-old physician.

A graduate of The University of Texas at Austin, Dr. Alexander earned his MD degree from Baylor College of Medicine, Houston. He completed an internship at Jefferson Davis Hospital, Houston, and residency in orthopedics at Charity Hospital of Louisiana, New Orleans. He moved to Beaumont in 1962, and at the time of his death was affiliated with the firm of Wallace, Shuffield, Alexander, and McNeill.

Dr. Alexander was a member of American Academy of Orthopaedic Surgeons, Western Orthopaedic Association, Jefferson County Medical Society, Texas Medical Association, and American Medical Association. He was also certified by American Board of Orthopaedic Surgery.

He is survived by his wife, Jo Karbach Alexander; one daughter, Kathleen Lake Alexander; two sons, Hylmar Scott Alexander and Hugh E Alexander, III; all of Beaumont; and two sisters.

Dr. Oglesby

Dr. Wolff

Dr. Alexander

Dr. Lancaster

Dr. Barrett

Dr. Chalmers

Dr. F H Lancaster

Dr. Frank Huston Lancaster died Mar 24, 1974, at the age of 81 years. The retired pediatrician had practiced in Houston for 36 years.

A graduate of The University of Texas Medical Branch at Galveston, Dr. Lancaster completed an internship at John Sealy Hospital, Galveston. Following postgraduate work at Washington University School of Medicine, St Louis, he established a family practice in Houston. After five years, Dr. Lancaster limited his practice to pediatrics. He retired in 1960.

Dr. Lancaster served as president of Texas Pediatric Society, Houston Pediatric Society, and Postgraduate Medical Assembly of South Texas. He was also a member of Harris County Medical Society, Texas Medical Association, American Medical Association, Southern Medical Association, and American Academy of Pediatrics. He was certified by the American Board of Pediatrics in 1934.

Dr. Lancaster is survived by his wife, Mildred Pearce Lancaster, Houston.

Dr. F O Barrett

Frank Oliver Barrett, El Paso anesthesiologist for over 50 years, died Apr 10, 1974, at the age of 88.

A native of Maryland, Dr. Barrett received his MD degree from Maryland Medical College, Baltimore, prior to serving as a major in the US Army in World War I. Following discharge from the service, Dr. Barrett moved to El Paso in 1918, where he remained until his death. He retired in 1964.

Dr. Barrett was certified by the American Board of Anesthesiology and was a member of American Society of Anesthesiologists, El Paso County Medical Society, and American Medical Association. He was elected to honorary membership in Texas Medical Association in 1959.

The physician is survived by his wife, Mozelle Irvin Barrett; son, Frank Oliver Barrett, Jr; both of El Paso; daughter, Mrs. Gwynne Dodge, Alexandria, Va; seven grandchildren; and five great-grandchildren.

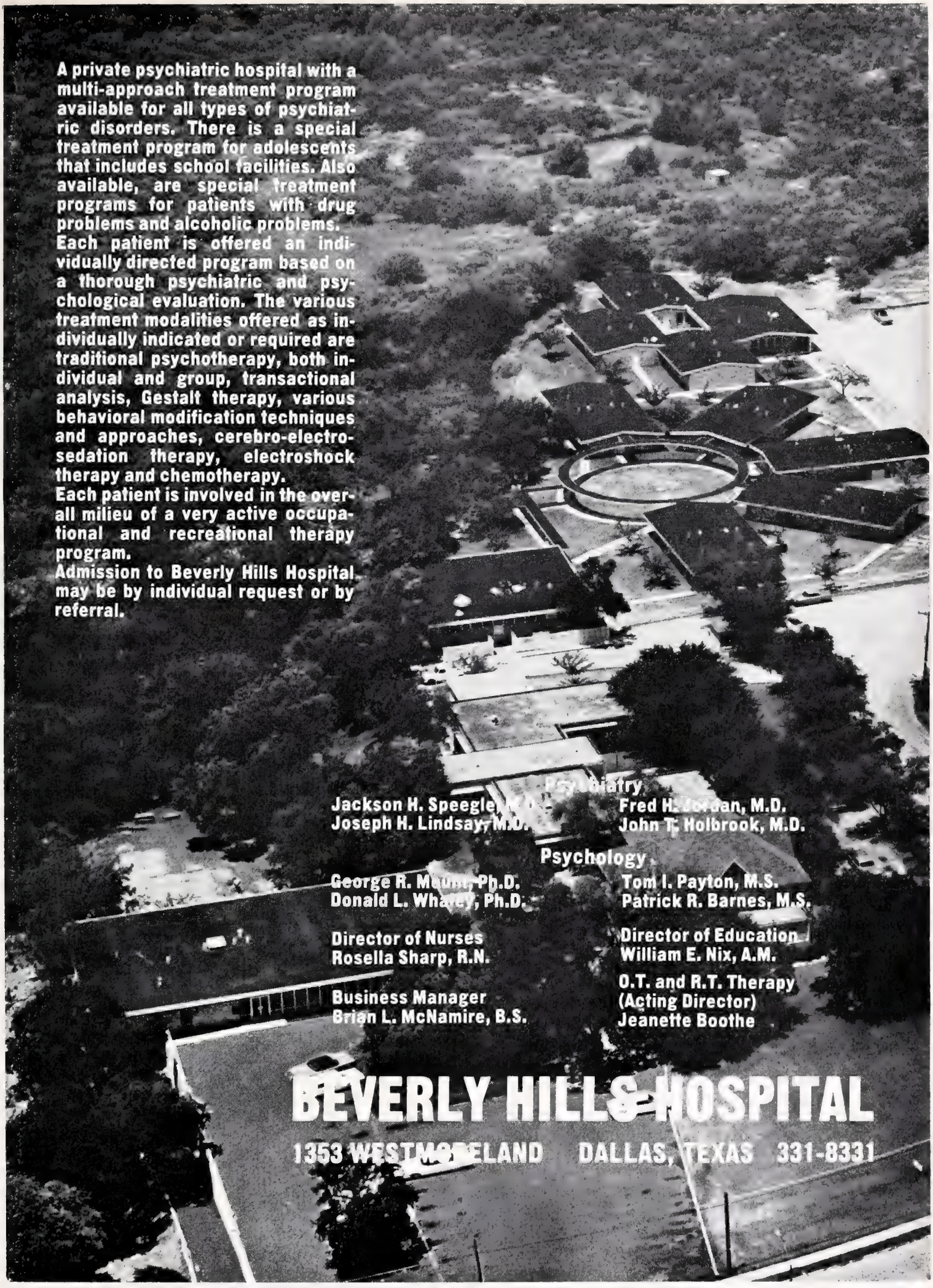
Dr. W D Chalmers

Fort Worth family physician, Dr. William Drew Chalmers was killed in the crash of a light plane Jan 27, 1974. He was 40 years old.

A native of Waxahachie, Dr. Chalmers received a BA degree from North Texas State College, Denton. He earned his MD degree from The University of Texas Southwestern Medical School at Dallas and completed an internship at St Joseph Hospital, Fort Worth. He began the practice of medicine in Fort Worth in 1958.

Dr. Chalmers held memberships in American Academy of Family Physicians, Tarrant County Medical Society, Texas Medical Association, California Medical Association, and American Medical Association.

He is survived by his mother, Mrs. Paul Chalmers, Fort Worth; and grandparents, Mr. and Mrs. Drew Eddleman, Italy, Tex.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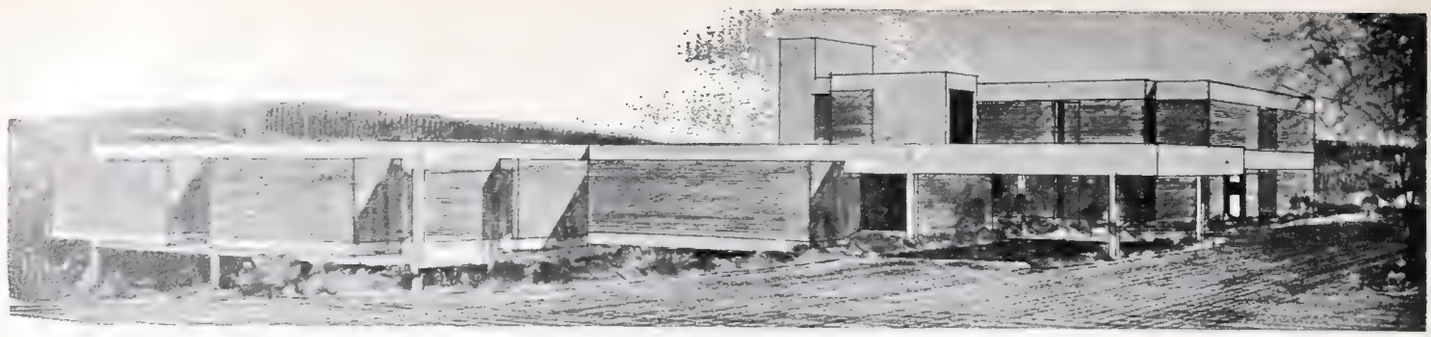

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9) How to get the best real estate deals brought to you by real estate brokers
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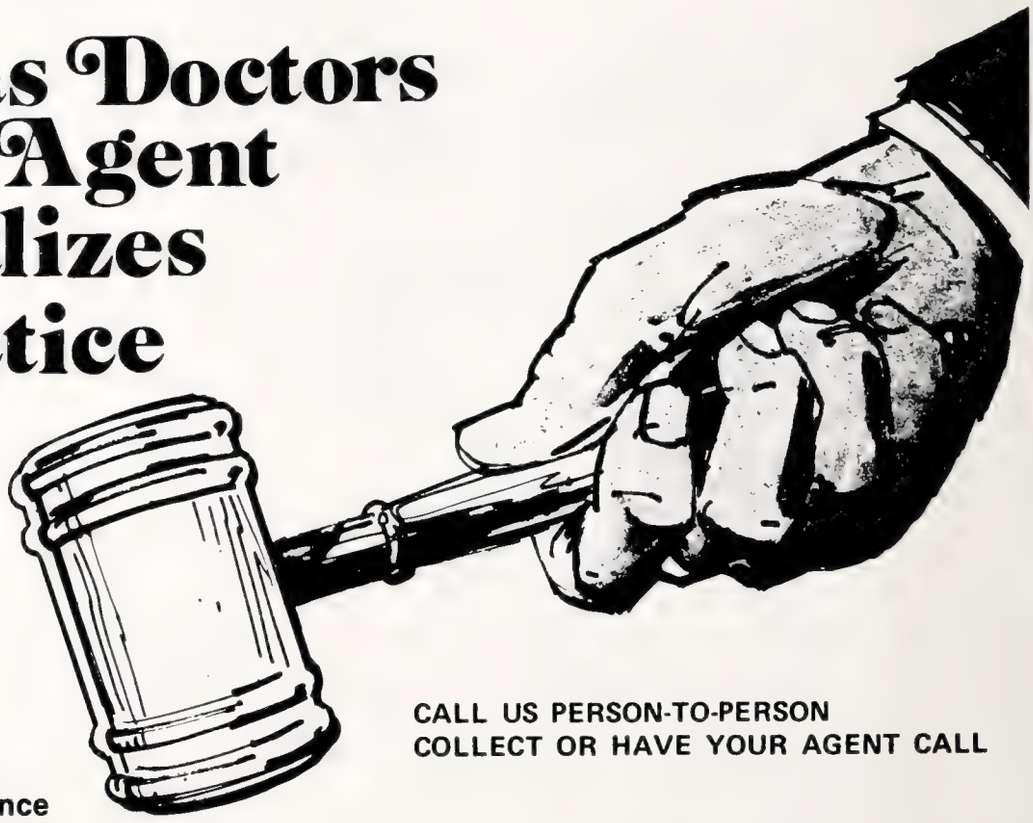

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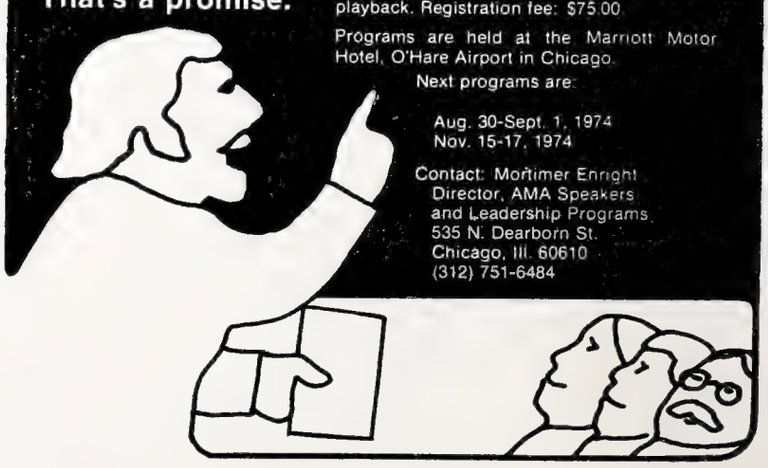

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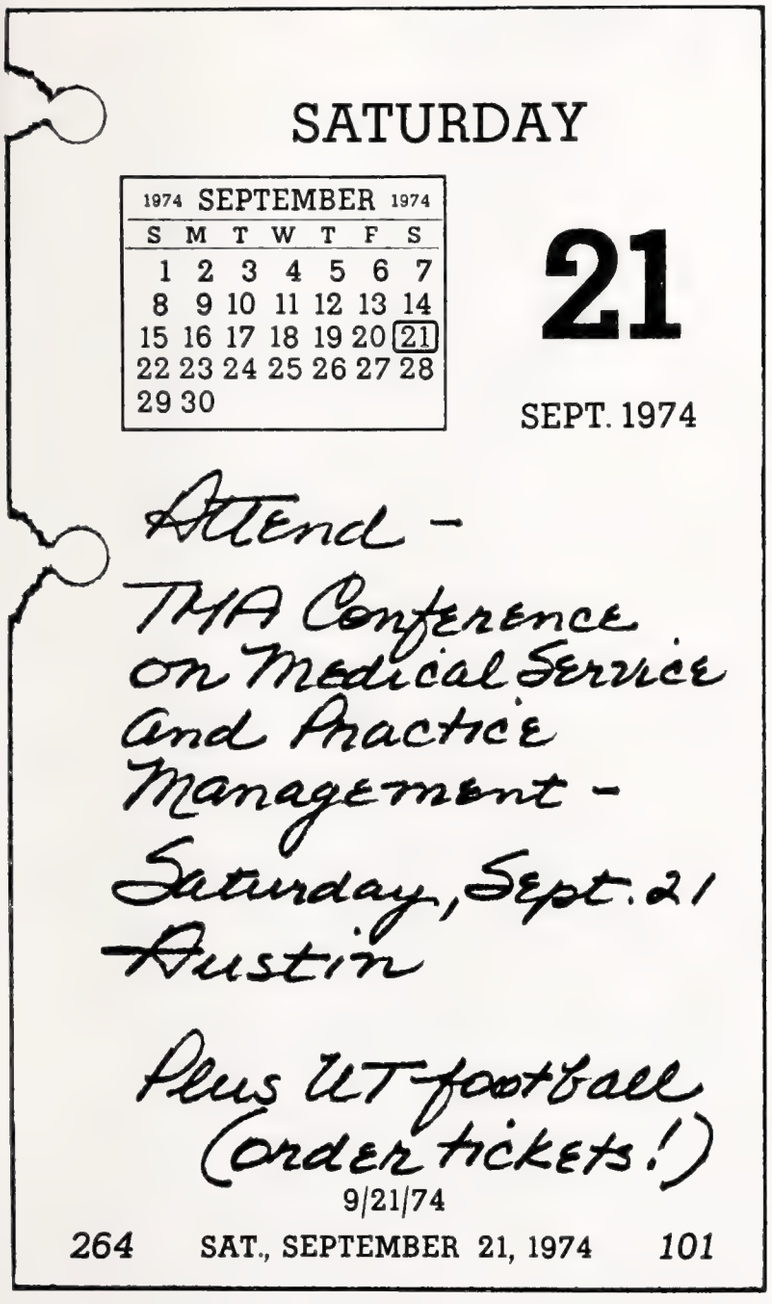

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Advertising Directory

Abbott	14
Ayerst Laboratories	4-5
Beverly Hills Hospital and Clinic	97
Blue Cross-Blue Shield of Texas	36-37
The Burdick Corporation	26
Burroughs Wellcome Company	23
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
The Diagnostic Clinic of San Antonio, P.A.	98
Dorsey Laboratories	27
El Paso Psychiatric Clinic	100
Flint Laboratories	11
Russell Grace Insurance	100
Ives Laboratories, Inc.	28
Mead Johnson Laboratories	39, 57
Kelsey-Seybold Clinic	72
Eli Lilly and Company	40
The Martin X-Ray and Radium Clinic	110
Medical Arts Clinic of Corsicana	91
The Medical Protective Company	71
Medicenter Psychiatric Hospital	71
The Pharmaceutical Manufacturers Association	12-13
Professional Lecture Series	99
The Prudential Insurance Company of America	9
Psychiatric Institute of Fort Worth	18
Radiology Associates of Fort Worth	91
Roche Laboratories	1-2, 116-117
Roerig	31-32
Safeguard Business Systems, Inc.	66
Scott and White Clinic	Back Cover
G. D. Searle & Co.	68-69
Seaview Hospital	26
Smith Kline & French	70
Starlite Village Hospital	98
Surgical Mechanical Research, Inc.	18
Texas Medical Association	
Automobile Leasing Program	17
Conference on Medical Service and Practice Management	113
Memorial Library Fund	92
Scandinavian Adventure	3rd Cover
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	91
The Upjohn Company	24-25
Wallace Pharmaceuticals	66-67
Westside General Hospital	112
Wichita Falls Clinic-Hospital	98

Physicians' Directory	101-110
Classified Advertisements	111-112

Editorials

TEXAS MEDICAL SCHOOLS AIM TOWARD FULL FUNDING AND MAXIMUM USE

Like all areas of modern medicine which touch upon the social and economic concerns of society at large, medical education has become the target of speculation and controversy. Numerous studies, both complete and in progress, deal with the question of how medical education can meet the needs of the populace: Do we need more physicians? How can we prepare students to cope with present and future trends in health care? How can we encourage students to enter specialty fields which are understaffed, and how can we solve the geographical distribution problem? These are questions which are not only difficult to answer, but which cannot be resolved without looking at the medical profession as a whole, as it is now and as it will be in the future.

One study which attempted to do this was completed by the Coordinating Board, Texas College and University System in 1968. The board made ten recommendations concerning priorities and needs for medical education in Texas between 1969 and 1980. The major thrust of the report called for Texas to increase its production of physicians by increasing enrollments at existing private and public medical schools, and by establishing two new public medical schools.

The response to these recommendations has been encouraging. The number of Texas medical schools has doubled from three to six. Consequently, we now have three established and respected institutions in The University of Texas Medical Branch at Galveston, The University of Texas Southwestern Medical School at Dallas, and Baylor College of Medicine in Houston. The three new schools—The University of Texas Medical Schools at San Antonio and Houston, and Texas Tech University School of Medicine at Lubbock—are making great strides, both in numbers of students and quality of curriculum. (See story on p 6 for statistics on 1974 graduates from all the Texas medical schools.) A closer look at each of these schools will show us what we have and what we can expect to have in terms of numbers of physicians by 1980.

The University of Texas Medical Branch at Galveston, our oldest school, is now the eighth largest in the nation. It uses eight hospitals and related institutions as major teaching and clinical facilities; a large building program is in progress. The school has pioneered with an excellent medical education program in family practice. The school plans to graduate 203 new physicians each year until 1980.

The University of Texas Southwestern Medical School at Dallas is also making progress. Both phases of a $40 million building program at the school and a $25 million expansion at Parkland Memorial Hospital are expected to be completed this August. A popular family practice residency program at John Peter Smith Hospital in Fort Worth now has 31 house officers. By 1980, Southwestern expects to be graduating 200 new physicians each year.

By 1976, plans at The University of Texas Medical School at San Antonio call for 122 new MDs to be graduated each year. If new facilities and buildings are funded by the Texas Legislature, as many as 200 MDs per year can be graduated.

A family practice program was established in July 1973 with a full-time faculty of 12 family physicians. In addition, San Antonio's continuing education program is growing. Attendance at courses is reaching toward 2,000 physicians, and the therapeutic seminars go to 57 hospitals in five states.

The University of Texas Medical School at Houston is carrying on a building program which should permit the admission of a freshman class of 100 in June 1976. Officials have applied for a grant from the federal government; if funded, it would permit an enrollment of 200 medical students in each class.

Here too, a family practice program is in operation at Memorial Hospital. A tri-hospital integrated graduate training program has been organized and is in operation.

Texas Tech University School of Medicine at Lubbock enrolled its first students, 36 freshmen and 25 juniors, in 1972. By 1980, Texas Tech expects to graduate 125 physicians per year. The Lubbock County Hospital District will build a teaching hospital adjacent to the school's quarters and medical training affiliation agreements are in effect with 31 hospitals and clinics throughout West Texas. The medical curriculum at Texas Tech is based on a calendar year, totaling 36 months, by means of trimesters, tutorial teams, family practice clinics, and rural preceptorships.

Baylor College of Medicine has established a family practice center, as well as a residency program in family practice. In an experimental program with Texas A&M University at College Station, 32 students will enter a six-year program in September 1975 working toward a BS degree in medical sciences from Texas A&M and an MD degree from Baylor. The school has doubled the size of its freshman class, and will graduate 168 MDs each year through 1980. (These will be in addition to the physicians trained through the A&M program.)

The privately chartered Texas College of Osteopathic Medicine in Fort Worth has contracted with North Texas State University to provide most of its basic science courses. The school graduated 18 physicians in June 1974, and by 1977 it will be graduating 57 new DOs each year.

The progress of our schools demonstrates the rapid growth and expansion of medical education in our state. A comparison of first-year medical enrollment in all Texas medical schools between 1968 and 1972 shows an increase from 408 to 707, a gain of 73%. Total enrollment between those years has risen from 1,455 to 2,456, for an increase of about 70%. In 1968, 321 students were graduated from Texas medical schools; in 1974, graduates numbered 599. By 1980, this number is expected to reach approximately 1,000 students.

Meanwhile, state funding of health education, although still inadequate, has increased from $37,000,000 in 1969 to $85,700,000 in 1973, to $122,300,000 for 1975.

This, then, is a quick overview of where medical education stands in Texas in 1974. We are producing more physicians, and through programs like family practice residencies, are encouraging more physicians to enter the primary care fields. And so the question now is: Where do we go from here? Do we need still more new medical schools to produce still more physicians? Are we really in the midst of a "health care crisis" caused in part by a shortage of physicians? Both the Texas Medical Association and the Coordinating Board have urged the Legislature to give full funding to our existing state medical schools rather than establishing new ones. The TMA Medical Advisory Committee to the Coordinating Board agrees that careful, continuous and long-range planning for our medical education facilities is necessary.

Problems of distribution and the need for more primary care physicians cannot be solved by the mere addition of new schools. We must seek innovative solutions to these problems within each school's curricula and organization, and we must provide incentives for physicians who wish to enter primary care. In addition, however, we should look to the future, taking into account the increasing numbers and changing roles of allied health care personnel like the physician's assistant, nurse practitioners, and clinical pharmacists. The addition of these specialists to the health care team complicate attempts to project the number of new physicians which will be needed in the future. In addition, we must consider technological advances, demographic shifts, economic trends, and possible federal government legislation. If we expand beyond our needs and capabilities, the medical profession might find itself all dressed up with nowhere to go—at least in terms of physician supply and geographical distribution.

For the present, we should continue to emphasize the procurement of full funding for existing institutions while taking a long, hard look at future needs, with the aim of maintaining continued excellence.

G. V. Brindley, MD, Temple.

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Doctors' incomes: no apologies needed

What is the value of the services a person renders to society? This question is prompted by the frequently mentioned high cost of medical care. There is usually a poorly veiled intimation that doctors' fees are too high, and, consequently, that doctors are overpaid.

In considering the overall view of compensation for American business and professional people, it is obvious that a great disparity exists in compensation for services rendered. There is much publicity concerning the salaries of industry executives, which often approach the $500,000 per annum level. Among this group are found the chief administrative officers of such giant corporations as the auto manufacturers, television networks, major oil companies, advertising agencies, and others.

Certainly the highest paid people in our culture are those in the entertainment field, whose annual incomes frequently are numbered in seven figures. I recall an article in a lay magazine some ten years ago in which a young doctor was severely criticized for asking $1,000 per month for his services. The headline on the next story speculated whether or not a popular young singer would make $1 million during that year.

There seems to be no logical basis for compensation in our society; all too frequently there are handsome rewards for individuals whose constructive contribution to mankind is negligible or entirely lacking. On the other hand, countless numbers of our people struggle, strive, and sacrifice in the constant effort to improve the quality of life and add to its enrichment, with utterly inadequate recompense or recognition.

In medicine there are accepted fee schedules, and certainly a small minority of doctors appear to earn large incomes. But can a price be placed on a human life that is prolonged or improved by treatment?

Are not the responsibilities of physicians greater than those of other workers? Are not physicians called upon for certain tasks which could not be adequately compensated by more money?

Certainly there are no valid reasons why physicians should be apologetic for their incomes.

E. W. Schmidt, M. D.

E. W. Schmidt, MD, President,
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Jun74

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Annual session wrap-up
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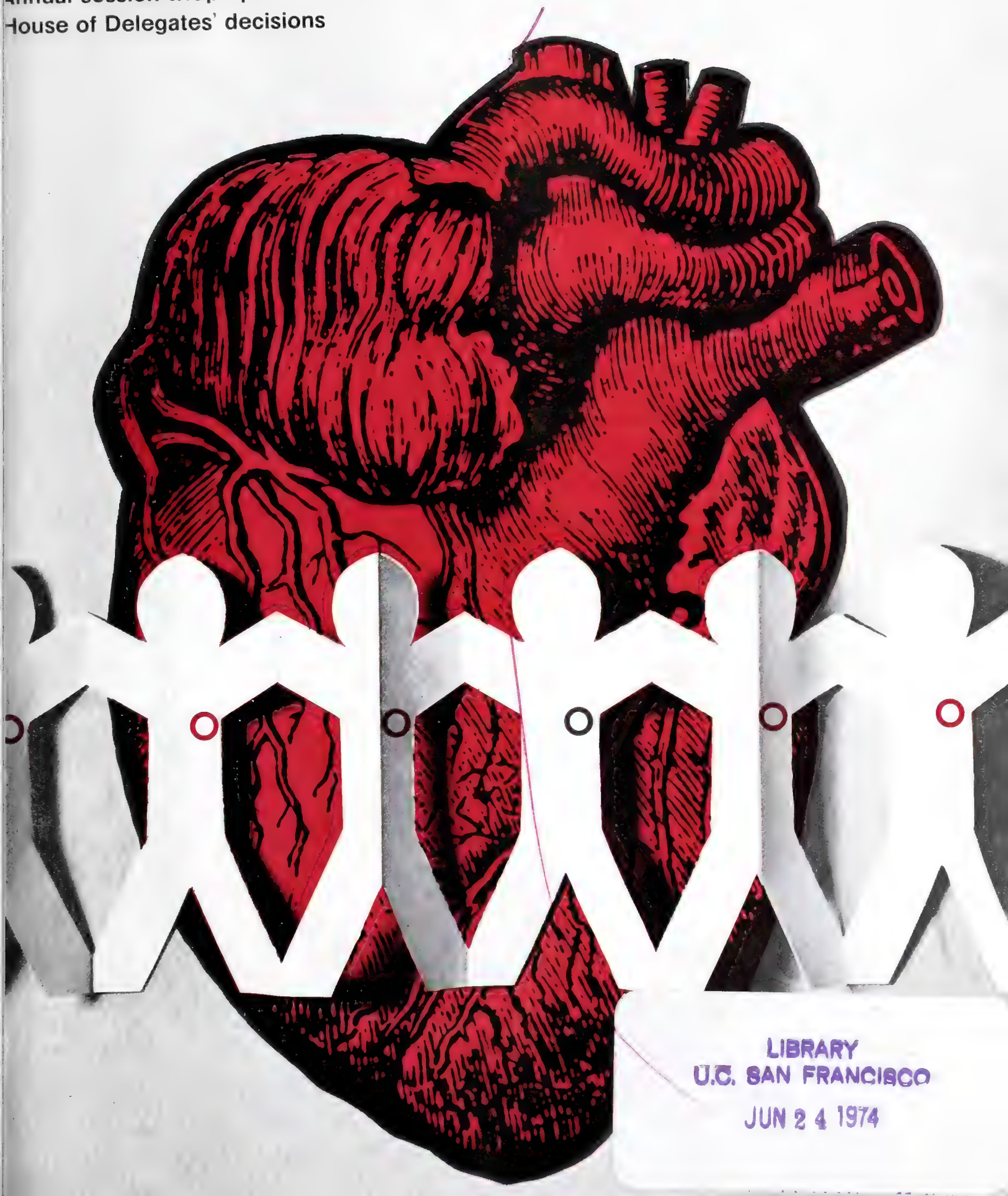

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Contents

SCIENTIFIC ARTICLES

47 Preventing coronary heart disease: The pediatrician's role
Dr. M. F. Graham

63 Slow ventricular tachycardia documented by His's bundle
Dr. Liberato A. Iannone; Dr. Richard J. McCarty

70 Regional flaps in head and neck surgery
Dr. Robert H. Komorn

81 A metabolic and nutritional evaluation of burn neutrophil function
Dr. E. Stan Lennard; Dr. Harold G. Petering; Dr. J. Wesley Alexander

EDITORIALS

130 PSRO not popular with MDs
Dr. David S. Dow

130 Rubella vaccine in pregnancy
Dr. Carl Muchnick

131 A warning!
Dr. Ivan W. Kuhl

134 House votes to fight PSRO

FEATURE

92 Annual Session '74

NEWS

6 House of Delegates followup

10 AMA resolutions

10 PSRO suit

13 Lubbock to implement TEL-MED

14 Immunology program

14 Epilepsy research grant

14 Willistons honored

15 Continuing education statistics

15 Specialty recertification

15 TMA elects officers

19 MediPhone service

19 Kidney program limits services

20 AMA recruiting for service corps

20 Patient care projects

20 UTMB records system

23 New medical training course

23 AMA sponsors TV series

23 Leukemia grants available

26 Insurance plans summarized

DEPARTMENTS

27 Capital Comments

30 Information for Authors

37 Coming Meetings

43 Continuing Education

99 Legal Protection: Facts You Should Know

103 Medicine and the Law

105 Questions/Answers

108 Medical Newsmakers

109 Medicine in Literature

111 Recent Deaths

ON THE COVER

Heart disease may begin earlier than is generally realized. The article beginning on page 47 tells what pediatricians can do to detect early coronary heart disease. It also suggests a role for them in prevention through encouraging young patients and their parents to adopt healthful habits and patterns of living.

NEXT MONTH

Scientific articles scheduled for July will be on cancer of the endometrium, hypotonic gastrointestinal x-ray studies, complications of amniocentesis, and familial occurrence of ganglioneuromas.

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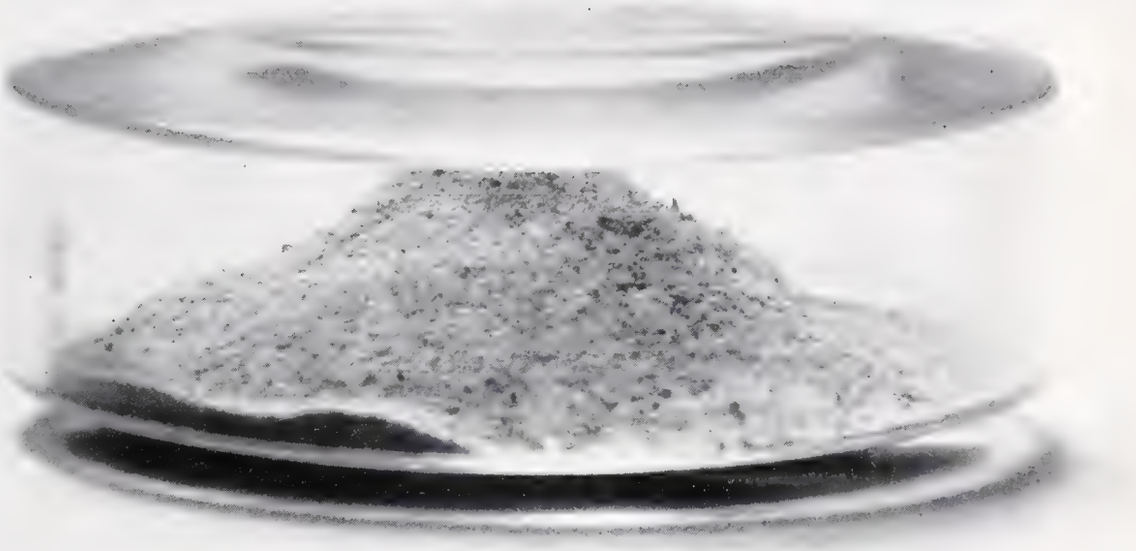

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House of Delegates names priority issues; commits itself to expansion of services

Meeting in Houston May 9-12, the Texas Medical Association's House of Delegates overwhelmingly expressed its commitment to expand and strengthen services and representation for Texas physicians. Priority areas include PSROs, prohibition of the corporate practice of medicine, efforts against any renewal of wage and price controls, HMOs, national health insurance, precertification of hospital admissions, and re-licensure of physicians.

To represent physicians effectively in these and other areas, the delegates approved a $50 dues increase beginning in 1975. They also approved a special $100 assessment this year to represent physicians through legislative and legal action, public and professional education programs, and through development of an "in-place," utilization and peer review system.

PSRO

Delegates supported legal action challenging PSRO which has been initiated by the TMA Board of Trustees (see *Texas Medicine* article p 10). On May 8, Texas Medical Association filed suit in the Austin Division, US District Court for the Western District of Texas against Caspar Weinberger, Secretary of HEW, challenging the constitutionality of Section 249(f) of the Social Security Amendments of 1972 regarding the creation of PSRO and the validity of regulations promulgated by the Secretary of HEW designating nine PSRO areas in Texas.

Declaring that members of the Texas Medical Association are committed "to provide highest quality medical care and to maintain patient confidentiality" and noting that the medical profession has been unfairly singled out for monitoring by Professional Standards Review Organizations, the delegates resolved to "exercise all possible courses of action to counter PSRO, including intensive efforts for repeal, amendment, deletion, and substitution of the entire PL 92-603 or Sections 207, 213, 219, and 249(f)." The House stated that the latter sections jeopardize the quality of patient care and that the provisions in the law are being "capriciously implemented through regulations."

"TMA showed good faith with the patients of Texas in 1973 by trying to comply with the law to protect quality of patient care, and HEW has

totally ignored our efforts and made it clear that the intent is to implement the law in its most harmful form to our patients," the delegates said. Should HEW persist in this "uncompromising, unreasonable, and arbitrary attitude," the delegates recommended that each physician "determine the extent, if any, of his participation in PSRO or similar programs."

The House of Delegates further voted to prepare and disseminate professional and lay literature on the detrimental effects of the law and regulations. They also approved preparation of audiovisual aids for radio, hospital medical staffs and boards of trustees, service clubs and other groups, and creation of a speakers bureau of qualified physicians to speak before various organizations on the subject.

Delegates also drew resolutions of commendation to praise Texas senators and representatives who supported them in their efforts to amend or repeal PSRO. Specifically cited with special resolutions were Representatives Bob Casey, Omar Burleson, and Robert Price.

The special $100 assessment of members was approved by a vote of 178 to 29 to support expenses for these activities.

Dues

In addition to the special $100 assessment this year, the delegates approved a $50 dues increase beginning in January 1975 to support many needed services and activities for members of the Texas Medical Association which cannot be provided with present funding. The recommendation of the reference committee increasing dues to a total of $130 in January was adopted by a vote of 198 to 24.

Abortion guidelines

To supplement its previous policy position on abortion, the House of Delegates approved a set of medical guidelines which had been drafted by the Committee on Maternal Health. The guidelines stated that unwanted pregnancy should and could be avoided in most circumstances and that education regarding sexuality and safe contraceptives should be readily available. The guidelines also stated that there should be alternatives to abortion. In cases of abortion, the guidelines specified that patients should have access to the health

NEWS

care necessary for a legal abortion to be carried out under optimum conditions, including early and accurate diagnosis of pregnancy, informed and nonjudgmental counseling, prompt referral, skillful and understanding personnel working in a good facility, reasonable cost, and professional followup. The guidelines also note that the safety of induced abortion depends upon the duration of the pregnancy at the time of the abortion, the ability of the person doing the abortion, the general health of the patient, and the facility in which the procedure is done. The guidelines will be detailed in July *Texas Medicine*.

Prudential Insurance Company agreement

The House of Delegates supported a recommendation that the Prudential Insurance Company of America be designated as the Association's underwriting company for group insurance programs on the basis of a new memorandum of agreement. Approval of the agreement finalized negotiations between the Association and Prudential which had originally been called for at the May 1973 session of the House of Delegates. Copies of the new memorandum of agreement with pertinent information relating to the agreement are to be made available to the membership.

Distinguished service award

Dr. Harvey Renger of Hallettsville was selected as the recipient of the Association's Distinguished Service Award for outstanding service to Texas medicine. The award will be officially presented at the Association's Fall Conference later this year. Dr. Renger has served as a President of the Texas Medical Association and was chairman of the Texas delegation to the American Medical Association for many years.

Financing for medical schools

The House of Delegates expressed concern about future financing of medical education, pointing out that the addition of new schools would dilute the quality of medical education, and that the present schools need additional appropriations from the state legislature. They supported continued efforts toward ample financial support for the six existing medical schools in the state.

Price controls

Pleased with the recent Congressional decision to end wage and price controls on medical care providers, the delegates cited extensive efforts by AMA and TMA officials on behalf of physicians. They also approved a resolution urging restraint upon TMA members in the matter of fee changes, asking that fee increases be limited to parallel the rise in the cost of living.

Government care programs

Conflict of Interest—Delegates recommended several amendments and policies which related to good patient care under government health care programs. In one statement, delegates cited hardships created in small hospitals by the Medicare-Medicaid "conflict of interest" doctrine. Because utilization review procedures prevent physicians from reviewing records of their own patients or partners, an undue burden is placed on physicians in small communities. Delegates asked that the "conflict of interest" doctrine be abolished under these programs and that the burden of proof of the "conflict of interest" doctrine be established after the fact.

Generic Prescribing—In another area, delegates noted pending legislation which calls for generic prescribing under Medicare and Medicaid. Even though generic equivalency in drugs

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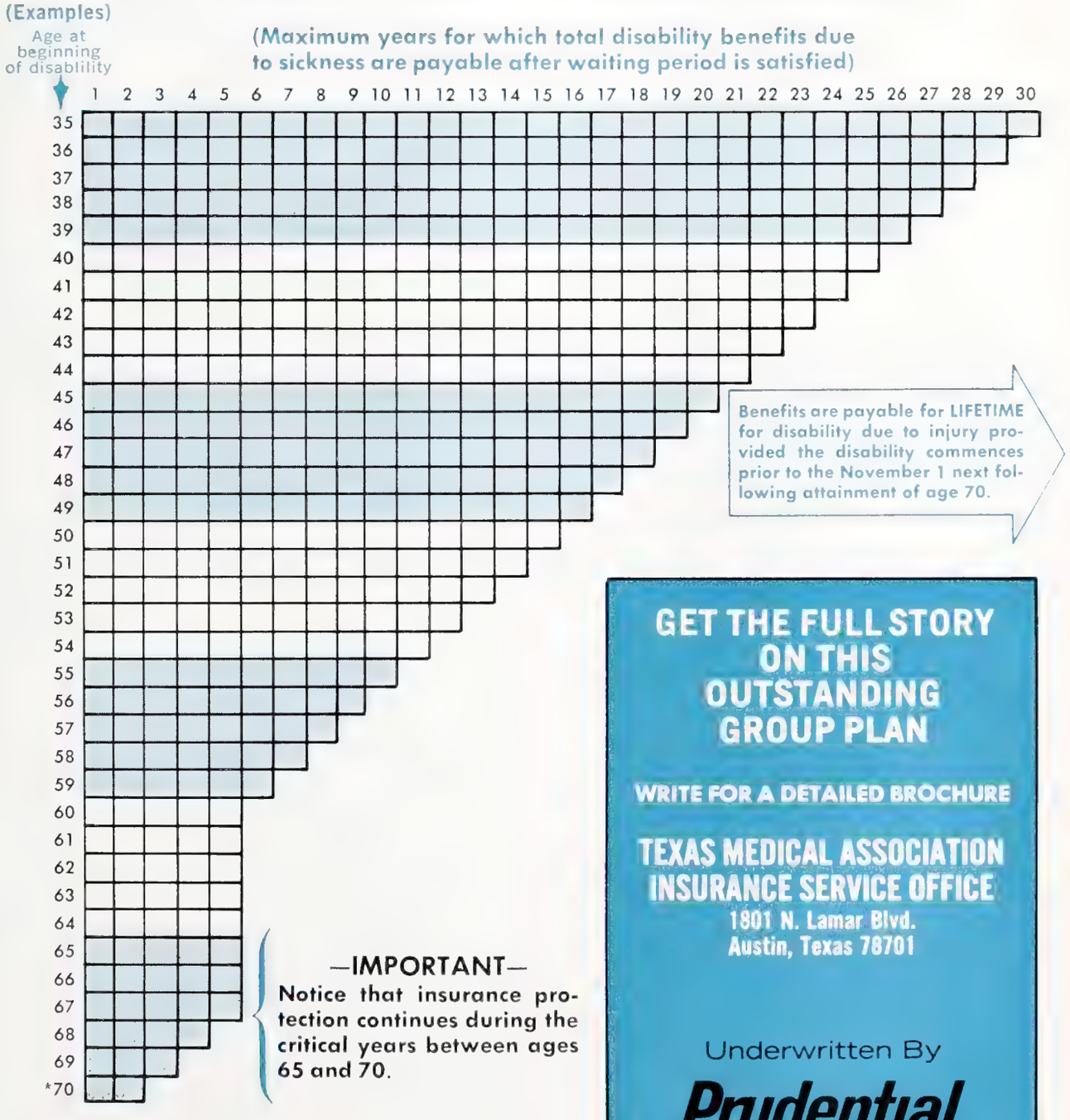

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does not necessarily mean therapeutic equivalence, the delegates observed that drug hearings nevertheless were being conducted by the United States Senate favoring generic prescribing. Delegates reaffirmed their opposition to compulsory generic prescribing and supported efforts to work for "retention of the patient's right to have the drugs and medications best suited for his individual needs by preserving the system of brand name prescribing as the doctor believes best for the patient."

Resolutions prepared for AMA meeting

The Texas delegation to the American Medical Association has prepared nine resolutions for introduction in the AMA House of Delegates meeting during the 123rd Annual Convention June 22-27 in Chicago.

Two resolutions to be introduced concern Professional Standards Review Organizations (PSROs). The first suggests that the AMA exercise all possible courses of action to counter PSRO and that the AMA House endorse and support the legal action already initiated by the AMA Board of Trustees. The second proposes that the AMA commend individual members of Congress who have called for the repeal of the PSRO law.

In addition, the Texas delegates will ask the AMA, as well as state and county medical societies, to urge members to become proficient in basic cardiopulmonary resuscitation and to develop training programs to this end.

The abolition of the conflict of interest doctrine as it applies to physician-patient relationship is the subject of another resolution. The resolution also proposes that the burden of proof of the conflict of interest doctrine be established after the fact.

The Texas physicians will also submit a resolution which would ask that the membership of the AMA Council on Medical Education consist of equal numbers of professional medical educators and private practitioners. The AMA is also being asked to encourage socioeconomic conferences for medical students and that faculties be urged to implement such programs in curricula where possible.

The resolutions include a suggestion that the AMA membership consider, on a voluntary basis, not completing the insurance forms for Aetna, but to give patients an itemized statement with the diagnosis, treatment, dates of treatment, and fee.

The AMA will be asked to reconsider its previous action and to reinstate the concept of rotating internships.

The final resolution concerns the reclassification of radio pharmaceuticals so that they may be carried by passenger carrying aircraft, thus protecting the availability of essential medical supplies to the patient. The AMA is asked to present such recommendations to appropriate federal agencies for consideration and implementation.

PSRO suit filed

The Texas Medical Association, through its Board of Trustees and ratified by the House of Delegates at its recent meeting, and eleven Austin physicians, individually and on behalf of all doctors licensed to practice medicine in Texas, filed suit May 8 against Caspar W. Weinberger, secretary of the Department of Health, Education and Welfare (HEW) in the Austin Division, US District Court for the Western District of Texas.

The civil action challenges the constitutionality of Section 249f of the Social Security Amendments of 1972 regarding the creation of Professional Standards Review Organizations (PSROs) and the validity of a regulation promulgated by the Secretary of HEW designating nine PSRO areas in Texas.

Speaking to the unconstitutionality of the PSRO legislation, the suit

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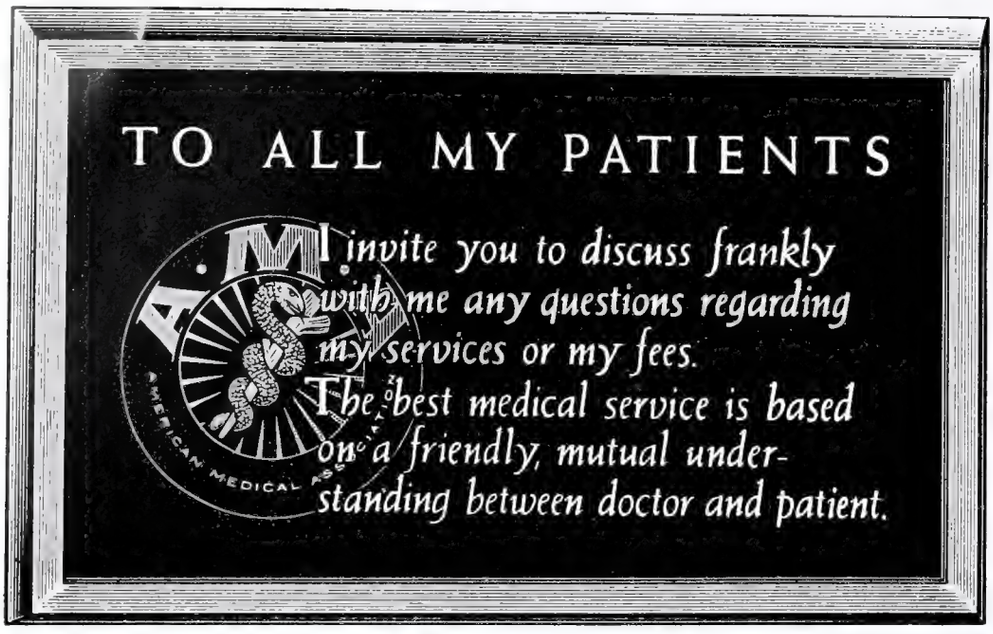

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states that enforcement of the PSRO law violates the Fifth Amendment to the US Constitution by depriving doctors of their rights to practice their profession; to administer medical care to their patients in accordance with the highest standards of medical practice and their best professional judgment; and their patients' right to receive medical care from physicians of their choice in accordance with the highest standards of medical practice and their physicians' best professional judgment.

Other allegations of the suit concern the effect of the PSRO legislation on the right to privacy in the physician-patient relationship; the interference with fundamental rights of doctors and patients by imposing norms of diagnosis, treatment, and care; and the negation of the presumption of competence, good moral character, and regularity of conduct and motive created by physicians' licensure.

Speaking to the invalidity of HEW regulations designating nine PSRO areas in Texas, the suit cites the agency action as being "arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law." The suit also terms these regulations as "contrary to constitutional right, power, and privilege . . . depriving these plaintiffs of due process of law and denying them equal protection under the law . . . in excess of statutory authority."

Among remedies sought by the plaintiffs are the determination by the court that the PSRO legislation, in whole or pertinent part, is unconstitutional and void; that alternatively the court set aside HEW regulations designating nine PSRO areas in Texas and compel the HEW Secretary, on a trial basis, to designate the state of Texas as a single PSRO area and to enter into an appropriate agreement with the Texas Institute for Medical Assessment (TIMA) as a statewide PSRO; that the HEW be enjoined and restrained from implementing and enforcing the PSRO statutes in whole or in pertinent part, or from entering into a PSRO agreement with any other party in Texas other than TIMA.

The plaintiff doctors include Drs. Ernest C. Butler, Grover L. Bynum, Robert Dennison, R. F. Ellzey, Homer Goehrs, James M. Graham, Sam N. Key, Jr., C. Hal McCuistion, John P. Rainey, Earl L. Yeakel, and John Youngblood.

NEWS

Lubbock to implement telephone library system

The West Texas Health Systems, Inc., is currently coordinating efforts to implement a TEL-MED program in Lubbock County.

Endorsed by the Lubbock-Crosby-Garza County Medical Society, the program has been pledged support by more than 25 Lubbock area health-related organizations.

The free telephone health library system is scheduled to begin operation around Oct 1. The service will consist of a collection of tape-recorded health messages which will provide a wide variety of health information to the public on how to remain healthy, how to recognize early signs of illness, and how to adjust to a serious illness.

Brochures will be widely disseminated throughout the county listing available subjects. Many tapes will be selected from the national master tape library of the TEL-MED program. Others will be locally produced to include subjects of regional concern.

The caller will simply ask the answering operator to play a certain tape number or identify the particular subject. The operator will select the requested tape cartridge, insert it into the playback equipment, and the message will automatically begin. When the tape has ended, it will eject itself and disconnect the telephone line. No names or conversation need be exchanged.

This public health information service originally was developed by the San Bernardino County (Calif) Medical

NEWS

Society in 1972. The service has been adopted by health organizations across the country.

The federal government has approved funds for the initial purchase of equipment for the Lubbock program. Additional funds for continuance of the program will be raised locally each year.

Program approved in immunology

A graduate program in immunology leading to master's and doctoral degrees have been approved by The University of Texas System Board of Regents for the University's Graduate School of Biomedical Sciences in Dallas.

The program will be interdepartmental among cell biology, biochemistry, microbiology, internal medicine, and radiology with more than 30 current faculty members participating. No new faculty will be required because the research being carried out is in the field of immunology and the individuals involved are prepared to add the proposed new courses.

Epilepsy research grant awarded to UT Dallas

An epilepsy research grant of $55,000 has been awarded to a professor at The University of Texas Health Science Center at Dallas.

Dr. Robert M. Lebovitz, assistant professor of physiology at the center's Graduate School of Biomedical Sciences, was awarded the grant for an in-depth laboratory study to help explain the mechanisms underlying the controlling factors in abnormal brain activity by the Public Health Service of the Department of Health, Education and Welfare. The study will be a continuation of his work on the basic mechanisms of convulsion. The researcher will be looking at convulsions that are periodic and those that are characterized by fever.

Mr. and Mrs. C. Lincoln Williston were honored during Annual Session for the executive director's 20 years with the Association.

Willistons honored for 20 years service

C. Lincoln Williston, executive director, and his wife were honored during the 107th Annual Session by the Board of Trustees and the House of Delegates in recognition of his 20th year with the Texas Medical Association.

On behalf of the physicians of Texas and the headquarters staff, Dr. John M. Smith, Jr., chairman of the Board, read a lengthy resolution before the House commending the Willistons for their service.

The director was cited for his accomplishments including increased Association services to physicians, better communications and distribution of information to members, stimulation of physician involvement in Association boards, councils, and committees, and his leadership in the growth of the Annual Session. His community activities, his dedication, and efficient administration were among other contributions mentioned.

Mrs. Williston shared the credit for these achievements and was recognized for "having created a suppor-

tive home life and having provided ample measure of humor and common sense to help maintain equilibrium and proper perspectives . . . ."
She was recognized as a staunch supporter of the medical profession and for the numerous occasions that she has placed the Association needs ahead of her own.
Mrs. Williston received a bouquet of yellow roses and the executive director was presented a briefcase. Dr. Smith said the couple will also receive a trip on behalf of the Association.

Texas offers variety in continuing education

According to figures compiled by *Texas Medicine,* 176 continuing medical education courses and 86 medical meetings have been scheduled in Texas this year.
These figures do not include the meetings of such organizations as the 115 county medical societies in the state which generally meet monthly, as do the medical staffs of most hospitals. In addition, courses added by the medical schools throughout the year would raise the total.
Topics of courses cover many areas of medicine and comprise general medicine and numerous specialty subjects.

Specialty boards approve recertification

A recent survey by the American Board of Medical Specialties shows that 19 of 22 specialty boards have formally approved voluntary periodic recertification examinations.
According to the survey, the American Board of Neurological Surgery opposed the concept, and the American Board of Allergy and Immunology and American Board of Nuclear Medicine have taken no official action.
The American Board of Family Practice will make periodic recertification mandatory.

TMA elects officers

Dr. Ed W. Schmidt of Pecos was installed as president and Dr. Nym L. Barker of Paris was selected president-elect of the Texas Medical Association during the recent Annual Session in Houston.

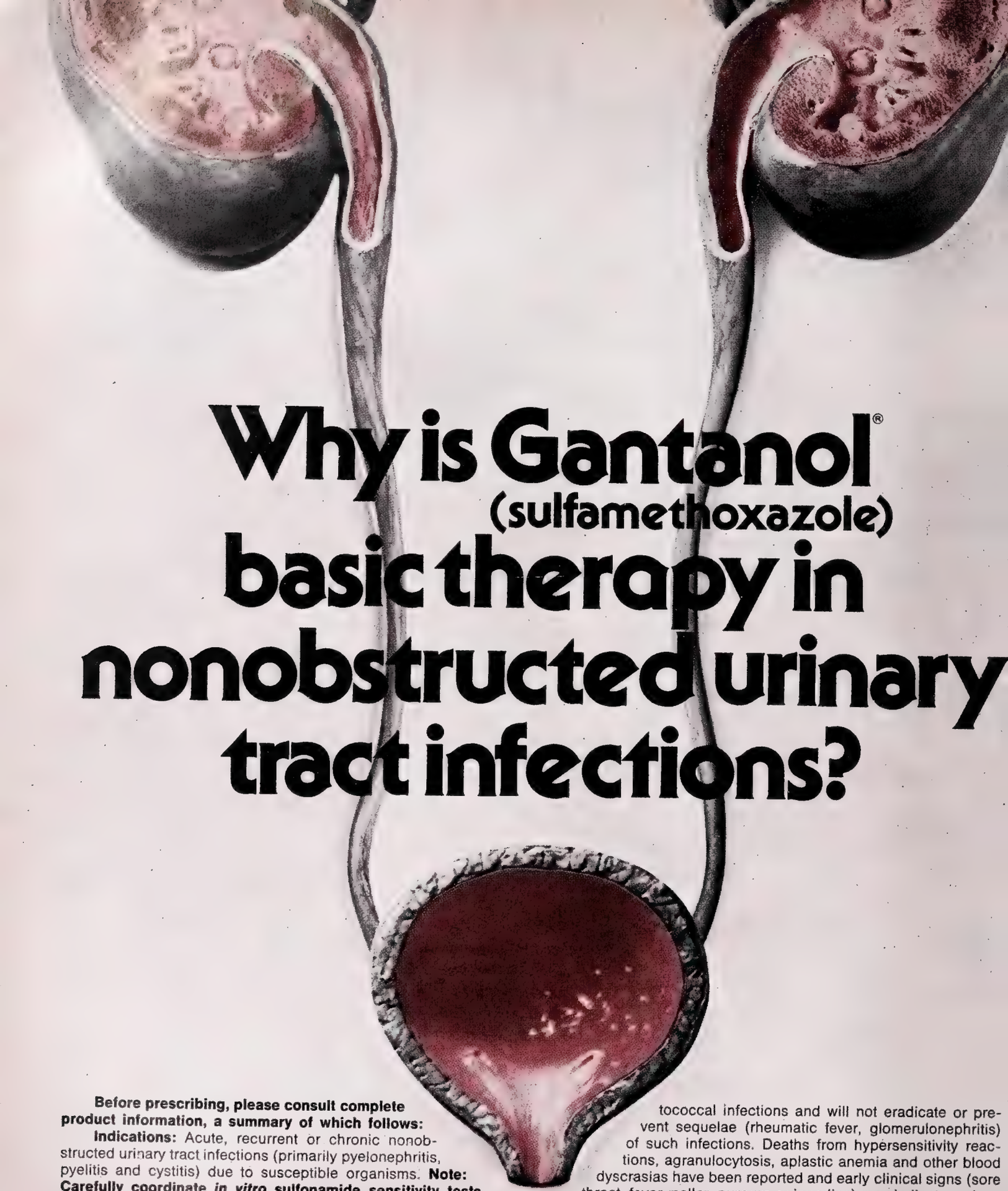
Dr. Barker

Also elected were Dr. Donald Gready, Houston, vice president; Dr. Ben R. Keller, Arlington, treasurer; Dr. James G. Morris, Lubbock, secretary; and Dr. Jack B. Lee, San Antonio, speaker of the House of Delegates.

Dr. Harvey Bell, Palestine, and Dr. Paul R. Meyer, Port Arthur, were selected to fill two open positions on the Board of Trustees. Dr. G. V. Brindley, Jr., Temple, was elected delegate to the American Medical Association with Dr. C. W. Castle, Liberty, as alternate.

Board of Trustees officers include Dr. John M. Smith, Jr., San Antonio, chairman; Dr. Don G. Harrel, Dallas, vice chairman; and Dr. Paul R. Meyer, Port Arthur, secretary. Selected as officers of the Board of Councilors are Dr. Haden E. McKay, Humble, chairman; Dr. Drue O. D. Ware, Fort Worth, vice chairman; and Dr. Ray L. Shepperd, Burnet, secretary.

The new president-elect is a member of the Texas State Board of Health, a past president of the Lamar-Delta County Medical Society, and the 14th District Medical Society. Dr. Barker is a member of the TMA Executive Board; has just completed two terms on TMA's Board of Trustees; is a delegate to the American Medical Association; a member of the Southern Medical Association; and a member of the American Society of Abdominal Surgeons. A chartered fellow of the American Academy of Family Physicians, Dr. Barker is on the staff of St. Joseph's Hospital in Paris and has served as president of its staff.



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Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

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Tablets/Suspension
(0.5 Gm) (0.5 Gm/teasp.)

pura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE

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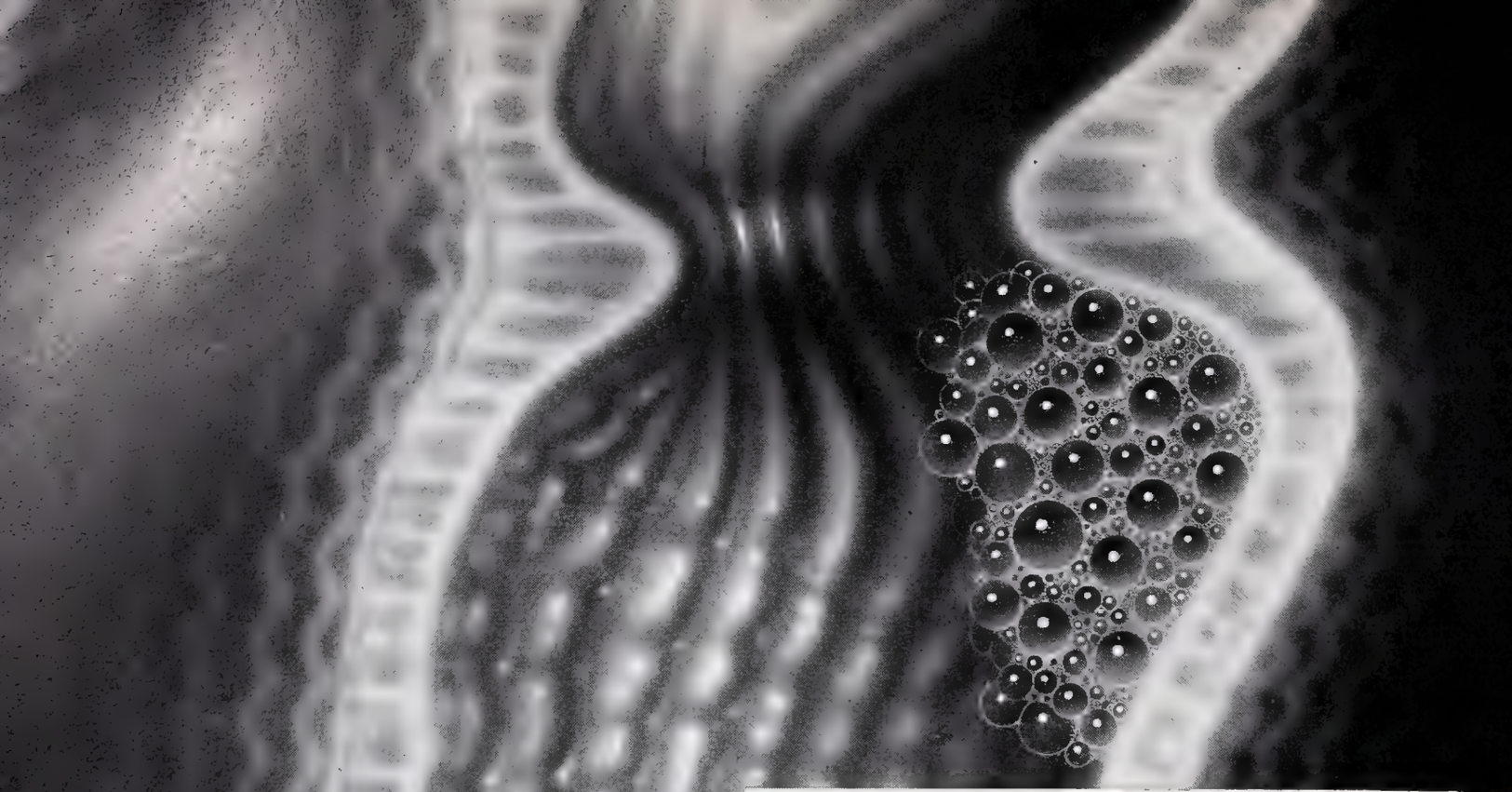

Entrapped gas...

Silent partner of GI spasm

Painful GI spasm in the presence of entrapped gas causes even more pain and more discomfort. Yet, while spasm is relieved, entrapped gas often goes untreated.

Not so when you prescribe Sidonna. Sidonna helps release entrapped gas with specially activated simethicone, a nonsystemic antiflatulent, while also helping to relieve spasm with a traditional combination of belladonna alkaloids. And Sidonna provides mild sedation with butabarbital.

Sidonna. The therapeutic partnership approach to functional or organic GI disturbances including spastic colon, irritable bowel syndrome, gastroenteritis, gastritis, peptic ulcer and nervous indigestion.

Contraindications: hypersensitivity to barbiturates or belladonna alkaloids; glaucoma, prostatic hypertrophy, pyloric obstruction. **Side Effects:** dry mouth, blurred vision, dysuria, skin rash, constipation or drowsiness. **Dosage:** one or two tablets preferably before meals and at bedtime.

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Each scored tablet contains: specially activated simethicone 25 mg., hyoscyamine sulfate 0.1037 mg., atropine sulfate 0.0194 mg., hyoscine hydrobromide 0.0065 mg. (equivalent to belladonna alkaloids [as bases] 0.1049 mg.) and butabarbital sodium N.F. 16 mg. (Warning: may be habit forming.)

A working partnership against the pain of gas and spasm

Consultations available through MediPhone service

MediPhone, a nonprofit organization, enables physicians wherever they may be located, to obtain medical information through consultations with authorities in specialty fields.

Twenty-four hours a day, seven days a week, the nationwide telephone consultation service puts the inquiring physician in touch with a specialist. MediPhone also performs education and consultative services for nonemergency calls.

MediPhone was originated in 1972 by its director, Dr. John G. Bellows of Chicago. The system, sponsored by the nonprofit American Society of Contemporary Medicine and Surgery utilizes the services of more than 600 consultants located in some 60 university medical centers throughout the country.

The Society and MediPhone are approved by the American Medical Association for continuing medical education. The charge for a consultation is $25, from which the consultant receives a fee for his services. The MediPhone number is (312) 782-7888. Additional information may be obtained from Dr. John G. Bellows, 30 N Michigan Ave, Chicago, Ill 60602.

Kidney program limits services

The Kidney Health Care Program conducted by the Texas State Department of Health has modified its operational policies in order to stay within budget limitations established by current state appropriations.

According to a notice distributed by James P. Rambin, director of the program, coverage for approved applicants, subject to the availability of state funds, will be limited to the following:

1. *In-center dialysis*—Prior to Medicare coverage, and in the event of patient need, this program will assist in deferring the cost of dialysis treatments only to approved medical facilities. State assistance can begin with the onset of a regular course of dialysis and will terminate when Medicare coverage begins (no longer than three months or 39 dialyses). If the patient is not Medicare eligible, state assistance may continue as long as regular dialysis is necessary, subject to availability of state funds.
2. *Home dialysis training and home dialysis*—Prior to Medicare coverage, and in the event of patient need, this program will assist in deferring the cost of home dialysis training only to approved medical facilities. State assistance can begin with the onset of a regular course of dialysis and will terminate when Medicare coverage begins (no longer than three months or 39 dialyses). No payments can be made to persons dialyzing at home who are Medicare eligible. Persons dialyzing at home who are not Medicare eligible can be reimbursed for certain supply expenses.
3. *Kidney transplantation*—No payment can be made for any costs incurred in kidney transplantation for patients with Medicare eligibility. Patients ineligible for Medicare or Medicaid will be considered for transplant benefits on an individual basis.
4. *Other expenses*—No expenses can be covered by this program except as stipulated above.
5. *Private insurance and other health benefits programs*—Payment will be made by this program subject to the above limitations only after the patient's private health insurance or any other liable sources (including Medicaid) have paid to the extent of their liability.
6. *Patient reimbursement obligation*—The program beneficiaries' obligation to reimburse the state for a portion of the benefits received in accordance with Section 9 of the Kidney Health Care Act (Article 4477-20, VACS) remains unchanged.

NEWS

AMA recruiting doctors for service corps

The American Medical Association has agreed to begin recruiting mid-career physicians for two-year assignments in the National Health Service Corps (NHSC).

This is one of several new or expanded functions spelled out in the NHSC's second contract award to Project USA, an AMA sponsored enterprise that has been working with the Corps since late 1972. The new contract, retroactive to last Dec 31, runs through June 1975.

The NHSC is a federal program that places physicians and other health professionals in areas of critical need, urban as well as rural. Corps volunteers generally serve about two years, though some elect to settle permanently in their assigned communities.

The Corps has traditionally attracted young physicians, but there is a feeling that some older physicians, already established in practice, might also be willing to accept a two year commitment.

Patient care projects approved by ASIM

Two patient care research projects, designed to enable clinical medicine to better handle the information it now generates, have been approved by the American Society of Internal Medicine's Economic Research and Education Foundation (ASIM/SEREF).

The first project will test a methodology which causes a physician to define therapeutic objectives, measures their attainment, analyzes reasons for failure to attain the objectives, and evaluates the physician's reaction to the analysis of the failure. The two-year program, funded for $65,000, is to be conducted by Dr. Whitworth F. Bird, Jr., in cooperation with the Utah Society of Internal Medicine.

The second project, headed by Dr. James F. Fries of Stanford University, will test the use of time-oriented records in patient care. This recording device facilitates short review and encourages use of data rather than memory in management decisions. Patient status may be summarized, variables cross-correlated, clinical conditions reviewed, prognostic indicators measured, and response to various therapies compared. It is computer-compatible and permits development of a computer data bank. Output may be used for formal scientific study, informal discussion, or for assistance in management of the individual patient.

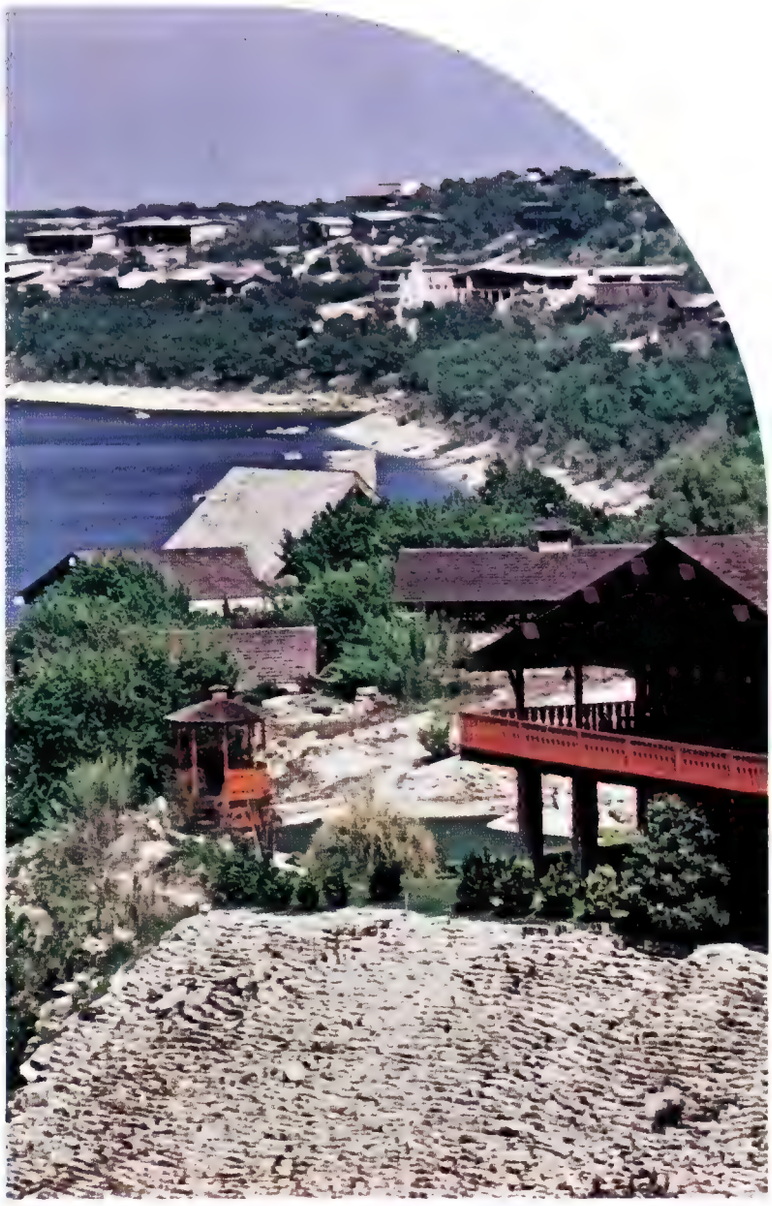
UTMB develops new records system

A medical records program designed to demonstrate the value of an automated record keeping and data retrieval system in medicine, is currently being implemented at the Family Medicine Clinic of The University of Texas Medical Branch.

Initial development of the "model" record system is being supported by a $60,000 grant from the Moody Foundation. In addition, two future grants from the foundation will help in maintaining the program and in financing demonstrations of the system to area physicians.

Medical data will be gathered on patients in the department's clinic and will be compiled at the UTMB service computation center. The records of clinic patients are currently being coded for processing at the central computer located at UTMB. Once the system is operating, print outs of the data will be available with the patient's permission to family medicine physicians as well as those physicians or specialists who might see the patient outside of the Family Medicine Clinic.

In addition to uses by the practicing physician, the Medical Branch be-



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Breast self-examination:

KEY ROLE OF THE PHYSICIAN

item:	**Breast cancer is a major concern of American women, according to a recent Gallup study conducted for the American Cancer Society.**
item:	**Although aware that early discovery improves the chances of cure, and that BSE can lead to early discovery, *fewer than 1 in 5* women practice BSE, and *only half* have an annual breast examination by a physician.**
item:	**Only 35% of all women polled reported that a *physician* had ever raised the subject of breast self-examination, and only 24% had received instruction from the physician on how to do it. Even among women who regularly see a gynecologist, only 34% had been instructed on BSE.**
item:	***But,* among women who received personal instruction from their physicians, the overwhelming majority *(92%)* practiced BSE during the preceding year.**

The Gallup study revealed that, far more important than increasing awareness of breast self-examination, is the problem of inducing women to practice it regularly. The physician plays a key role in this—by teaching women the correct technique, and instilling in them the confidence that will assure their continued practice of BSE.

The American Cancer Society gives major emphasis to breast cancer through research and a vast array of public educational materials, designed to give women life-saving information about the disease. Our latest approach is via a pioneering television film starring Jennifer O'Neill, "Breast Cancer: Where We Are." Where we *will* be in a few years will certainly hinge on our joint efforts.

American Cancer Society®

lieves that medical researchers will also have an opportunity for numerous studies based on patient records. Information on a variety of topics including specific diseases, symptoms, and prescribed treatments will be available for immediate retrieval.

Dr. M. L. Ross, chairman of the Department of Family Medicine, stresses that patient-doctor confidentiality will be maintained. Numbers will be substituted for actual patient names on case histories used in research.

Once the "model" medical records system is functioning, workshops and demonstrations will be conducted for physicians throughout Galveston County. The physicians will then be invited to join the county-wide computer record network. Participation will be voluntary.

Patient relationships part of new course

Role-playing, scripts, videotape, and critique are the educational tools of a new medical training program at The University of Texas Medical Branch.

Offered for the first time this past year, "Introduction to Patient Evaluation (IPE)" prepares freshman medical students to handle the complexity of the physician-patient relationship.

Freshman students learn to acquire personal and intimate patient information, to take and to write complete medical histories, and to develop a sense of confidence in dealing with patients. This is accomplished by interviewing "programmed patients" or patients who have been trained to give the history of an illness and to respond in a predictable fashion. The interviews are videotaped, and then evaluated by faculty and the students.

IPE, formulated last summer by a special faculty committee, is a combination of elements from two other medical courses, "Introduction to Clinical Medicine I" and "Behavioral Science."

AMA sponsors health TV series

The new "Today's Health" television series has made its Texas debut on WOAI-TV in San Antonio.

Sponsored by the American Medical Association, the weekly series presents a variety of health information topics in each half-hour segment. The AMA is currently preparing an information kit for physicians in broadcast areas.

Syndicators of the program predict that the show will be established in over 40 metropolitan areas within six months. In San Antonio, the series is aired at 12:30 pm on Sundays.

Grants available for leukemia projects

The Leukemia Society of America, Inc., is now accepting financial grant applications from investigators whose interests are centered on the problems of leukemia.

Deadline for submitting completed application is Oct 1. Proposals will be reviewed next January, with approved funding to become effective in July 1975.

According to the agency, grant support is confined to post-doctoral researchers whose work may be expected to lead to an understanding of the causes of and hopefully a cure for leukemia and related disorders of the blood-forming organs. Candidates may be of any age, color, sex or creed, and need not be American citizens.

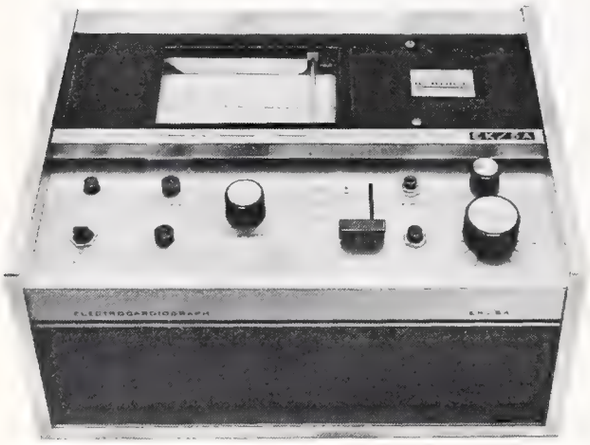
Only one application in each grant category from an individual sponsor at a sponsoring institution will be considered.

The three types of funding available from the Society are: 1) Scholarships: five year grants for a total of $100,000 for those who have demonstrated

NEWS

• Physician • Nurse • Biomedical Engineer • Administrator • Medical Technician

Each gets what he wants—in a new Burdick EK/5A electrocardiograph



THE PHYSICIAN demands diagnostic accuracy, definition, dependability; no time-consuming retakes; mistake-free lead coding—and that's what the solid-state EK/5A delivers. Exceeds AHA frequency response recommendations.

THE NURSE OR MEDICAL TECHNICIAN wants the ease of operation that results in time saving — from features like the EK/5A automatic lead marking activated by a fast-switching lead selector, and easy portability.

THE BIOMED ENGINEER looks for multiple use in the hospital; patient-isolated circuitry (**leakage is less than 10 microamperes**); solid-state simplicity; multiple circuit boards for easier, faster service; computer compatibility; sound ECG design.

THE ADMINISTRATOR AND PURCHASING AGENT like (1) the savings that result from dependable performance; (2) medical staff satisfaction, and (3) Burdick dealer service and maintenance availability.

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PRESCRIBING INFORMATION

Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

WORMS BLITZED

A single dose of Antiminth (1 cc. per 10 lbs. of body weight, 1 tsp./50 lbs.—maximum dose, 4 tsp.=20 cc.) offers highly effective control of *both* pinworms and roundworms.

Antiminth has been shown to be extremely well tolerated by children and adults alike in clinical studies.* Pleasantly caramel-flavored, it is non-staining to teeth and oral mucosa on ingestion... doesn't stain stools, linen or clothing.

One prescription can economically treat the entire family.

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Pinworms, roundworms controlled with a single, non-staining dose of

ANTIMINTH®

(pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

*Data on file at Roerig.

Please see prescribing information on facing page.

NEWS

distinct ability in the investigation of leukemia. 2) Special Fellowships: two year grants for a total of $31,000 for those who have demonstrated ability in post-doctoral research whose qualifications place them between scholar and fellow status. 3) Fellowships: two year grants for a total of $19,000 for promising younger investigators to encourage their work in leukemia research.

Under certain circumstances, emergency grants up to $3,000 may be awarded for one year to initiate or implement a research program.

Application forms may be obtained by writing to Dr. Joseph H. Burchenal, Vice President for Medical and Scientific Affairs, Leukemia Society of America, Inc., 211 E 43rd St, New York, New York 10017.

Insurance plans summarized

Hearings on national health insurance proposals have been much in the news this spring. The following is a brief summary of the major national health insurance proposals:

Medicredit-AMA-sponsored bill provides comprehensive basic and catastrophic health insurance financed through tax credits or vouchers with full federal payments for the poor, and related to income otherwise. Estimated cost about $12 billion in "lost" revenues. Voluntary. Present private system of insurance utilized. Co-insurance and deductibles.

Kennedy-Mills-Social Security-financed and operated. Mandatory $31.5 billion would be collected from new Social Security payroll tax, plus $8.5 billion of added general revenues. Catastrophic coverage, co-insurance and deductibles, federal subsidization for poor. Private health insurance companies limited to role of fiscal intermediaries, supplemental coverage.

CHIP-Administration's plan, HEW-operated, revised and expanded version of original proposal, requires employers to provide comprehensive insurance for workers. Estimated new private costs, $31.5 billion; $6 billion general revenues. Federal underwriting of protection against catastrophic illness and costs to poor. Co-insurance and deductibles. Private health insurance companies remain dominant insurers.

Ameriplan-AHA-sponsored bill provides for establishment of new program of health care delivery through locally organized health care corporations. Establishes program of health insurance coverage, including catastrophic, with employers paying 75% of premiums. HEW would provide coverage for aged and indigent. Cost $18.1 billion new revenues. Run by a special Department of Health.

Health Security Act-Labor bill provides for comprehensive health benefits for all financed through an employer-employee payroll tax and from general revenue. Cost, $80 billion or more. General revenue tax, $8.5 billion. Special board sets policy, HEW operates.

Health insurers-system of national health insurance implemented through existing health insurance systems. Income tax credits for cost of benefits would be phased into private insurance over a 10-year period, catastrophic included. Insurance pools used to provide benefits to poor, near poor, and previously uninsurable. Cost, $8.1 billion added tax revenues.

Long-Ribicoff-Social Security-financed catastrophic coverage, assistance to low income people, stricter regulation of private health insurance. Cost, about $6 billion.

U.S. Chamber of Commerce-similar to but less broad than CHIP, requires employers to make health insurance available. Supplants Medicaid with totally-federal program. Insurance pool for self-employed, smaller businesses. Catastrophic cost, $4 billion.

CAPITAL COMMENTS

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: The US Senate Subcommittee on Health held two days of hearings on implementation of the Professional Standards Review Organization (PSRO) section of PL 92-603 May 8 and 9. Sen Wallace F. Bennett (R-Ut), author of a law on PSRO, took advantage of the opportunity afforded by the hearings to hit back at critics of PSRO. On May 9 Dr. Milton V. Davis, Dallas, testified on behalf of the Texas Medical Association. Dr. Davis explained the position of TMA in relationship to PSRO, the history of efforts to submit proposals to the Department of Health, Education and Welfare (HEW) concerning PSRO area designations in Texas, and the support of various organizations for the Texas Institute for Medical Assessment (TIMA) proposal as well as the detrimental consequences of the HEW decision on PSRO.

WASHINGTON: On May 15 the US Senate's Anti-Trust and Monopoly Subcommittee, chaired by Sen Phillip A. Hart (D-Mich), held hearings on alleged monopoly practice in the health care sector. Testifying before that subcommittee were former state senator Joe Bernal, San Antonio; state Rep Mickey Leland, Houston; Jackee Cox, free lance writer; Michael Mendelson, attorney for the Mexican American Legal Defense and Education Fund; Dr. Walter Faggett, San Antonio, chairman of the Bexar County Anemia Association, and Dr. Carter Pannill, former dean of The University of Texas Medical School at San Antonio. Using vicious and unsubstantiated allegations, the witnesses sought to create the appearance of anti-trust conduct among TMA, the Texas State Board of Health, the Texas State Board of Medical Examiners, Blue Cross-Blue Shield of Texas, The University of Texas Board of Regents, the Bexar County Medical Society, and the Bexar County Medical Foundation. All were alleged to be in a conspiracy obstructing the growth of health maintenance organizations (HMOs) as well as excluding health care to the poor in Texas. A typical comment was one made by Bernal who said "the political medicine men in Bexar County practice more hypocrisy than Hippocrates." At the end of the hearings Sen Hart issued an invitation to the TMA to respond at a later date. The invitation was formally accepted and TMA will testify as to the false allegations brought forth at that hearing.

AUSTIN: The Texas Consitution Convention began its deliberations on the General Provisions Section of the Texas Constitution which contains the medical practitioners section previously reported upon in *Texas Medicine,* Nov 1973, p 115 and May 1974, p 23.

WASHINGTON: Proposed regulations to implement the Health Maintenance Organization Act of 1973, were published by HEW in the *Federal Register* May 8. The regulations are concerned with laws, and grant and contract funding process. Regulations dealing with federal certification of HMOs and the mandatory

dual option section of the bill requiring employers to offer HMO alternatives where they exist will be issued at the end of June.

WASHINGTON: The House Ways and Means Committee began extensive hearings on national health insurance the last week in April and will continue for some months. The initial hearings included testimony from HEW Secretary Caspar W. Weinberger; Dr. Russell B. Roth, president of the American Medical Association; Dr. Malcolm C. Todd, AMA president-elect, and Dr. Ernest T. Livingstone, chairman of the AMA Council on Legislation. The AMA reiterated its strong support for the Medicredit bill noting that the measure is sponsored by 183 members of Congress.

WASHINGTON: Congressman Wilbur Mills (D-Ark), chairman of the House Ways and Means Committee, has introduced two pieces of legislation which would have major impacts on Medicare and Medicaid. HR 13461 would require that all hospitals participating under Medicare and Medicaid be offered incentive awards for greater efficiency and quality management as well as the option of receiving payment on the prospective basis. The proposal has the approval of the American Hospital Association and the Federation of American Hospitals and Blue Cross. Congressman Mills also introduced HR 13411, introduced in the Senate as S 3143 by Sen Frank Church (D-Id), which would establish an independent Social Security Administration outside of HEW and remove the Social Security Trust Funds from the HEW budget. The proposal is also embodied in the Kennedy-Mills Comprehensive National Insurance Act.

WASHINGTON: Sen Edward M. Kennedy, (D-Mass), chairman of the Senate Subcommittee on Health, has introduced a bill S 3441 to amend the Food, Drug and Cosmetic Act in order to "correct practices in pharmaceutical promotion and advertising" that have been the subject of hearings by the subcommittee. The sweeping bill also will create a new national center for clinical pharmacology.

WASHINGTON: The Senate has passed a fiscal 1974 supplemental appropriation bill that would provide $60.7 million for support of health maintenance organizations. The House will set aside the same amount. In reporting the bill to the Senate floor, however, the Appropriations Committee expressed its concern that the Nixon Administration has not yet submitted a budget request to implement the HMO Act of 1973. The Committee added three months to the available time during which the HMO funds can be spent because of the delay in regulation and spending plans.

WASHINGTON: House Democrats, voting in caucus to refer a subcommittee proposal to reorganize the House (the Bolling Committee), in effect, shelved the plan. Behind-the-scene action by Rep Mills and chairman Harley O. Staggers (D-W Va) of the Commerce Committee both opposed reorganization because it would shift Ways and Means jurisdiction over health matters to Commerce.

WASHINGTON: New HEW Regional Director for the Dallas Region covering five southwestern states is Stuart H. Clarke, acting assistant secretary of HEW for administration and management. Clarke has been with HEW since 1967, when he was appointed Public Health Service personnel director.

WASHINGTON: President Nixon has signed into law PL 93-270, the sudden infant death syndrome bill. The law requires the HEW secretary, through the National Institute of Child Health and Human Development, to carry out programs relating to research and other activities of sudden infant death syndrome. The law authorizes $9 million in grants and contracts over the next three years.

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BUTISOL Sodium saves your patients money: costs less than half as much as most commonly prescribed sedative tranquilizers.*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

*Based on surveys of average daily prescription costs.

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Precautions: Exercise caution in: moderate to severe hepatic disease; anticoagulant therapy, because of possible increased metabolism of coumarin anticoagulants; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects.
Adverse Reactions: Slight hangover, drowsiness, lethargy, headache, skin eruptions, nausea and vomiting, hypersensitivity reactions (especially in those with asthma, urticaria, angioneurotic edema, or similar conditions).
Usual Adult Dosage: For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg.
Available as: Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

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Information for authors

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each paper is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material.

Manuscripts should be typed double-spaced with ample margins on firm paper. Carbons are unacceptable, but the author should keep a copy.

The *title* should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

The *author's names* and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

The *text* should be narrative with complete sentences, *few abbreviations,* and logical subheading. For *spelling and usage* the editors follow "Dorland's Illustrated Medical Dictionary," 24th edition, and "Webster's Third New International Dictionary, Unabridged." *Quotations* must give credit to both author and source. A concise *introductory summary* is required.

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, top, author's name, and title of article in brief. *Legends* should be in complete sentences, numbered, and typed on a separate sheet. *Color illustrations* are authorized if they are of special value.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Permission should be obtained from the publishers and the authors for any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited in the bibliography. Copies of permission letters should be submitted with the manuscript.

All material is subject to *editing,* but authors receive typescripts to check before publication. Prompt return of typescripts to *Texas Medicine* office avoids delay in publication. After the article is sent to the printer, only minimal revision may be made.

Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Editorials should be prepared in the same general manner, and should be written in clear, concise language. They should be 300-500 words in length (about two to three pages typed with double spacing.)

Contributions to the news section should be sent to the Editorial Offices, 1801 N. Lamar Blvd., Austin 78701, by the 5th of the month preceding the month of publication.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Contributions, previously unpublished, are welcomed for review. News and other items should be sent to the Editorial Offices by the 5th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Scientific Articles are reviewed by technical and specialist consultants and are selected for publication in Texas Medicine by the Scientific Publication Committee, which is appointed by the Board of Publication. Editorials and other articles are subject to review by officers of the Texas Medical Association, appropriate expert and technical consultants, and representatives of county medical societies when in their purview.

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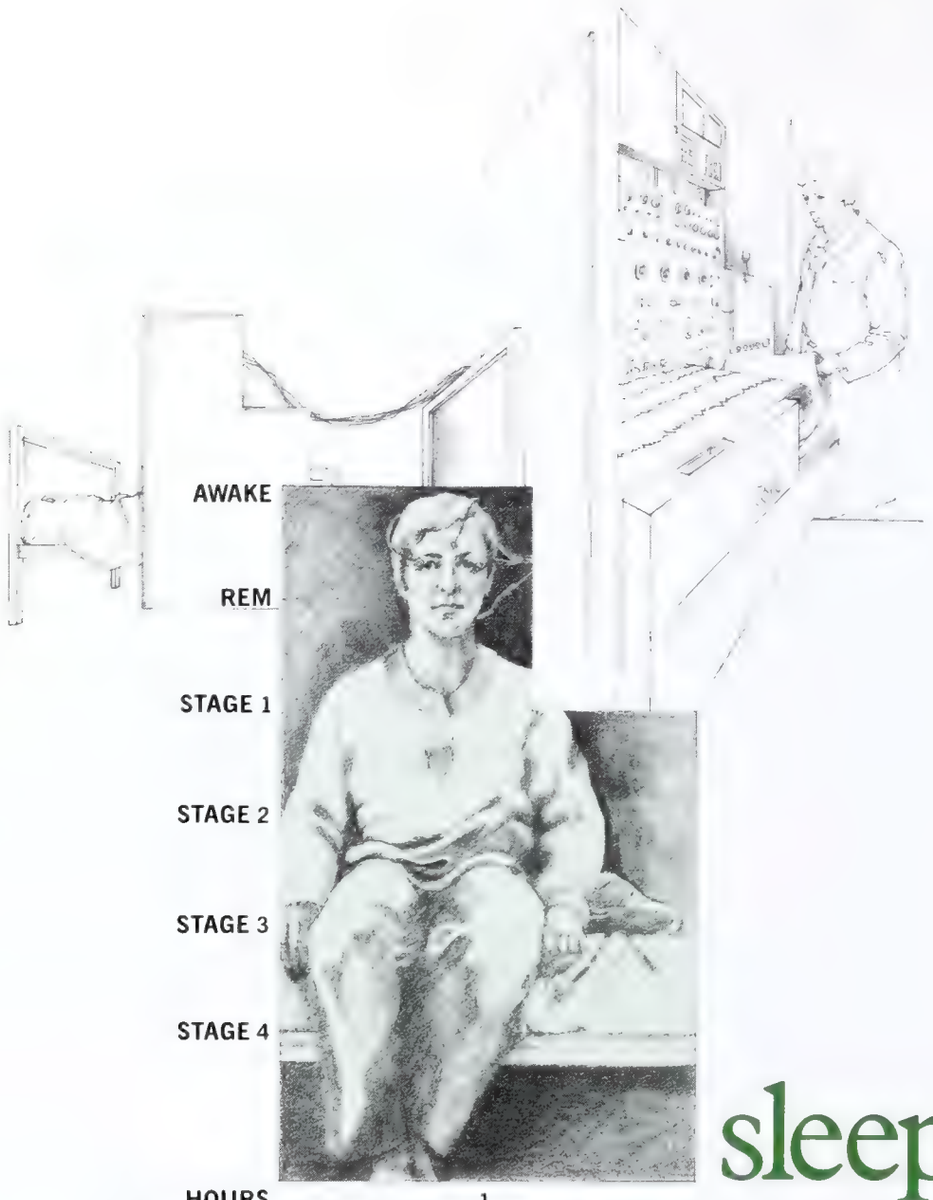

sleep begins within 17 minutes, on average ...

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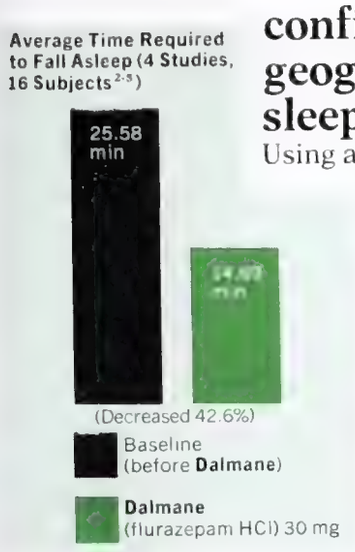
Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]



confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage[2-5]

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended

Contraindications: Known hypersensitivity to flurazepam HCl.

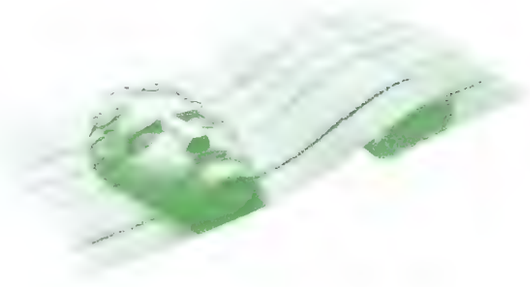
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



when restful sleep is indicated

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One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.

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- **reduces nighttime awakenings**
- **sustains sleep 7 to 8 hours, on average, without repeating dosage**

REFERENCES: 1. Kales A, *et al*: *Arch Gen Psychiatry 23*:226-232, Sep 1970
2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
3. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

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Opinion & Dialogue

Is there a need for a drug compendium?

Government Health Official

Henry E. Simmons, M.D.
Deputy Assistant Secretary for Health
Department of Health, Education and Welfare

A drug compendium of the type I envision would fill a definite need for the practicing physician. Such a compendium would give him all the information necessary for using a drug intelligently, and it would do so in a clear, concise, convenient, objective and balanced fashion.

What a Compendium Should Contain

I believe the compendium should inform the doctor what a drug will do, when he should use it, for what type of patient, for how long, in what dose, what benefits his patient is likely to obtain, the risks involved, and cross-reactions with other drugs.

The information would be based on the package insert and have the same legal status. In fact, a complete compendium with complete and current information might even eliminate the necessity

Maker of Medicine

Joseph F. Sadusk, Jr., M.D.
Warner-Lambert Company

A drug compendium, or preferably compendia, should, I believe, be private, not federal, in sponsorship. They should contain comprehensive listings of drugs available for prescribing. They should be single, legibly printed volumes of reasonable size, updated quarterly or semiannually and completely revised every year.

Function of a Compendium

A compendium should furnish the following information on drugs in the following order: indications for use, side effects, adverse drug reactions, contraindications, drug interactions, drug dosage and the dosage forms marketed. Drug prices should not be included because they vary so widely and change rapidly.

No compendium should set forth drugs of choice or discuss relative efficacy. Such questions must be left for the practicing physician to decide, whether on the basis of the medical literature, his own clinical experience, advice of colleagues, information supplied by manufacturers, and so on.

Nor should a compendium undertake to educate the doctor on how to use drugs. Rather, it must be a reference source designed primarily to refresh his memory as to drugs he may not use regularly. It

for a package insert in many instances. This would constitute a substantial saving for the manufacturer.

By a complete compendium, I do not mean a volume of prohibitive size. You don't need a book describing 25,000 products with an enormous amount of repetition. Rather, drugs should be arranged by class. Mutually applicable information would be provided, along with brief discussions pinpointing differences in specific drugs of that class. Listings would be cross-indexed in a useful way.

Other Available Documents as Sources of Information

Existing references such as PDR and the AMA Drug Evaluation are obviously useful but they are incomplete. Either they are not cross-referenced by generic name and do not group drugs with similar characteristics, or they do not list all the available and legally marketed drugs. And some of those omitted may be very useful. On the other hand, drugs made by more than one supplier, tetracycline for example, may be fully described a dozen times in the same book.

While perhaps PDR could be rearranged and cross-indexed with generics included, and while the AMA Drug Evaluation might also be modified and expanded, I am not sure that the end result would have all the attributes required for a useful compendium. At the same time, you would run the risk of amassing a voluminous and unwieldy tome.

Should Editorial Comments Accompany the Listings?

Subjective judgments, in my opinion, have no place in a compendium. However, if there is substantial evidence based on a sound body of science concerning relative efficacy of several drugs, certainly that information should be included. The committee of experts compiling and editing a particular section would also have to assess and indicate instances where a meaningful difference between drugs is pertinent.

Sponsorship, Compilation and Editing

Producing a book like this would undoubtedly be difficult and demanding. It would obviously take a great deal of talent and expertise, and would require a varied and experienced group, ranging from writers and editors to highly skilled clinicians and pharmacologists. Style, format and clarity of language would play an important part in determining the usefulness of the book. And it should be updated periodically and completely revised annually.

I have no opinion whether the government or the private sector should sponsor and/or finance the compendium. What is most important is that the compendium be an authoritative, objective and useful source of information for the doctor to have at hand as a ready reference.

---

should in no way imply control over the practitioner's prerogatives.

Why Another Compendium?

A practicable, single-volume compendium cannot, nor is it necessary to, include all drugs on the market today. From my practice of internal medicine for some 15 years, my experience as a consultant, and as a faculty member of four or five medical schools, I would estimate that a doctor uses only 30 to 35 drugs regularly. The 1972 Physicians' Desk Reference, incidentally, contained about 2,500 entries.

As to whether there should be a federal compendium, in my opinion, as stated earlier, the answer is easy—there should *not* be one. The proposal assumes that existing compendia are inadequate. We're not sure of that at all. Whatever its imperfections, the present drug information system in the U.S. is open, multifaceted, pluralistic and extensive. Good compendia exist, as well as other ample sources on drug therapy, ranging from journal literature through AMA Drug Evaluation to company materials. Not all physicians may use such sources as often or as well as they should, but that is the fault of the man, not of the sources.

In any event, rather than produce another book, it makes much more sense to work on improving existing compendia, and perhaps they could, as knowledge advances, include more accumulated clinical data and experience, and more information on drug interactions and adverse reactions.

Implications of a Federal Compendium

Take a hard look at the implications of a federal compendium. It would have the force of law, virtually dictating what drugs to use and how to use them. In effect, it would be a regulatory document with legal or quasi-legal status, posing medical/legal problems similar to those the doctor may now encounter if and when he departs from the provisions of the package insert. A compendium under federal aegis would tend to restrict decisions on drug therapy to one orthodox level—a most dangerous trend for medicine.

New Compendium—A Medical Option

I detect no ground swell of initiative or support whatsoever for a federal compendium—or, for that matter, for a new compendium of any type. A 1969 PMA survey conducted by Opinion Research Corporation found that only 15 per cent of those physicians interviewed felt a new compendium was needed. And a large majority did not favor the involvement of the federal government if one were to be created, preferring instead a nongovernmental consortium.

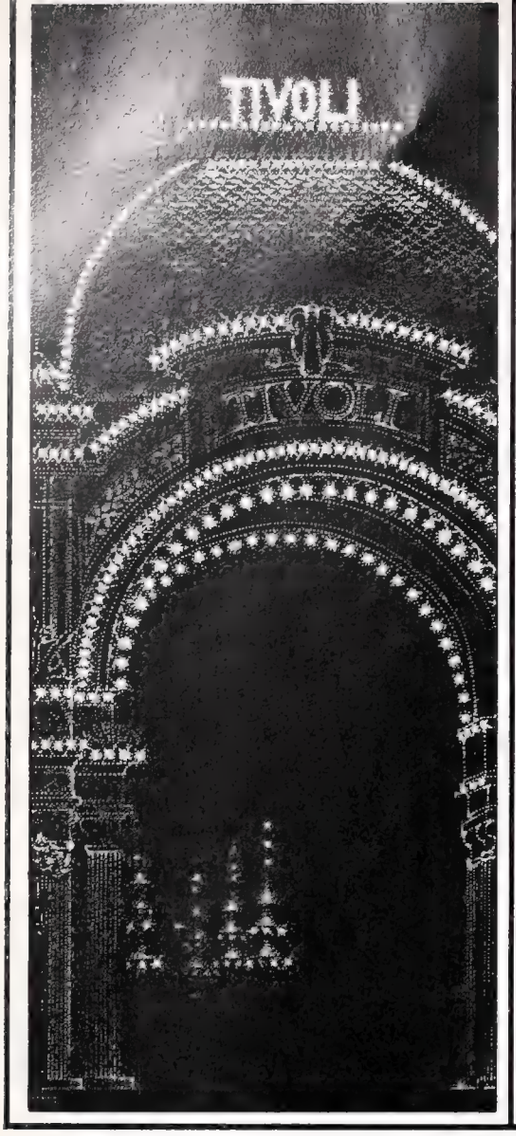
Even if we come to a time when the medical profession itself opts for a new kind of compendium, it should be handled and financed, ideally, outside both government and industry. Final review and editorial authority could be delegated, say, to specialty bodies and medical societies—but above all, *not* the government.

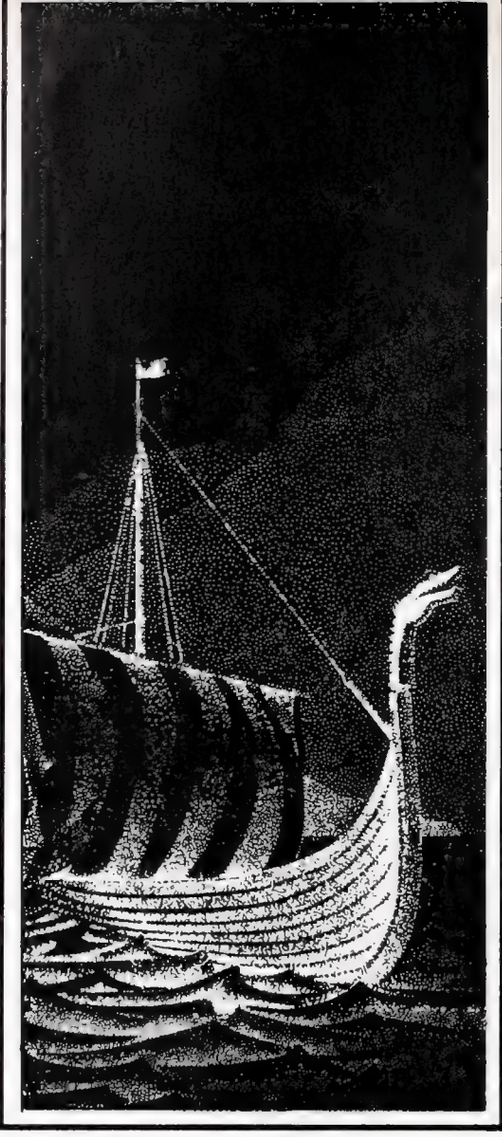
Surely the health care system in the United States has far more vital matters to consider than the extensive cost and effort that would have to go into the preparation and maintenance of a new, monolithic compendium, and especially one bearing the imprimatur of the federal government.

Opinion & Dialogue

What is your opinion, doctor? We would welcome your comments.

The Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005





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COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION

The 123rd Annual Convention of the American Medical Association will be held June 22-27 in Chicago. Dealing with health issues and medical knowledge from the viewpoint of the practicing physician is the continuing aim of the scientific program. A total of 54 scientific sessions are scheduled, in addition to 36 postgraduate courses. Along with scientific sessions will be an array of exhibits and the presentation of 30 medical films.

A new feature of the 1974 convention will be a series of fireside forums, informal evening presentations at the downtown Hyatt House Hotel, in which participants will visit one of six Chicago medical schools via videotapes made by the faculty working with equipment and patients. The faculty which assisted in the tapings will be present to conduct informal discussions.

Contact: American Medical Association, 535 N Dearborn St, Chicago 60610.

AMERICAN HEART ASSOCIATION, TEXAS AFFILIATE

American Heart Association, Texas Affiliate, presents its 1st Annual Stroke Club Conference June 21, at the Sheraton-Fort Worth Hotel, Fort Worth. Program topics include history of stroke club concept, American Heart Association involvement, and the psychological effects of stroke. The objective is to demonstrate how most stroke victims can be helped to help themselves and to demonstrate to the families of stroke victims how they can play an important role in helping the stroke victim regain his identity.

Contact: American Heart Association, PO Box 9929, Austin 78766.

HEALTH PHYSICS SOCIETY

The Health Physics Society will sponsor its annual meeting July 7-11 in Houston. Radiation in manned space flights, radiological protection for the Skylab astronauts, management of transportation accidents involving radioactivity, permissible levels of exposure to microwave radiation, and the new health and safety act as it relates to occupational radiation exposure are a few of the topics included in the program. Workshop programs will include recent standards and radiation practices, diagnostic x-ray survey procedures, environmental monitoring around nuclear facilities, and cancer producing effects on low-level ionizing radiation.

Contact: Wordie H Parr, Physical Agents Branch, National Institute for Occupational Safety and Health, Cincinnati 45202, Chrmn.

CURRENT MEETINGS IN TEXAS

TEXAS COMMISSION ON ALCOHOLISM presents its 17th Annual Institute of Alcohol Studies July 7-11 at The University of Texas at Austin. Among the goals of the institute are the promotion of the commonality of the problem of alcohol abuse and alcoholism to all service providers and the need to coordinate in order to deal with it comprehensively. The Institute will provide the most current and factual information on program innovations in such areas as education, training, public information, treatment, rehabilitation, evaluation, occupational activities, and grants development; on referral services; on national programming; and on state and federal legislative and judicial developments. Contact: Wayne L Ewen, Texas Commission on Alcoholism, 809 Sam Houston Bldg, Austin 78701, Dir.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, will present its 17th Annual Ruidoso Summer Clinic July 15-18 at the Chaparral Motel, Ruidoso, NM. Contact: Bob Reid, PO Box 456, Sunland Park, NM 88063, Exec Sec.

AMERICAN MEDICAL ASSOCIATION's Fourth Hemisphere Nutrition Conference will be held Aug 19-22 in Bal Harbour, Fla. The economics of food production in a world forced to establish priorities for limited supplies of energy will be a major theme of the conference. It will also feature continuing education sessions for nutritionists to provide an update of information for those who deal with malnutrition as it relates to disease. Contact: Department of Foods and Nutrition, American Medical Association, 535 N Dearborn St, Chicago 60610.

For other courses and symposiums, see Continuing Education Courses, pp 43-44.

Calendar of Listings

■ Denotes Texas Meetings

JULY

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Seattle, July 25-27, 1974. Mrs. Margaret H Henry, 36391 Maple Grove Rd, Willoughby Hills, Ohio 44094, Exec Sec.

INTERNATIONAL ASSOCIATION FOR CHILD PSYCHIATRY AND ALLIED PROFESSIONS, Philadelphia, July 28-Aug 2, 1974. Dr. Herman D Staples, 24 Green Valley Rd, Wallingford, Pa 19086, Sec-Gen.

NATIONAL MEDICAL ASSOCIATION, New Orleans, July 28-Aug 1, 1974. Robert D Watkins, 2109 E St NW, Washington, DC 20037, V-Pres.

RADIATION RESEARCH SOCIETY, Seattle, July 14-20, 1974. R J Burk, Jr, 4211 39th St NW, Washington, DC 20016, Exec Dir.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, July 12-13, 1974. F C Schmidt, 1809 E 18th, Denver 80218, Exec Off.

■ TEXAS COMMISSION ON ALCOHOLISM, Austin, July 7-11, 1974. K E Beahan, 809 Sam Houston State Office Bldg, Austin 78701.

■ TEXAS PHARMACEUTICAL ASSOCIATION, Houston, July 21-25, 1974. Luther R Parker, R Ph, PO Box 4487, Austin 78701, Exec Dir.

AUGUST

■ AMERICAN CANCER SOCIETY, TEXAS DIVISION, Board of Directors, Dallas, Aug 7-8, 1974. Curt W Reimann, PO Box 9863, Austin 78766, Exec VP.

AMERICAN HOSPITAL ASSOCIATION, Chicago, Aug 12-15, 1974. John Alexander McMahon, 840 N Lake Shore Dr, Chicago 60611, Pres.

NATIONAL MEDICAL AND DENTAL ASSOCIATION OF AMERICA, St Augustine, Fla, Aug 4-8, 1974. Dr. Henry Polchlopek, 434 Springfield St, Chicopee, Maine 01013, Sec.

ROCKY MOUNTAIN RADIOLOGICAL SOCIETY, Denver, Aug 22-24, 1974. Dr. Lorenz R Wurtzebach, 4200 E Ninth Ave, Denver 80220, Sec-Treas.

SEPTEMBER

■ AMERICAN ACADEMY OF PEDIATRICS, TEXAS CHAPTER, El Paso, Sept 20, 1974. Dr. Paul Meyer, 3121 Procter, Port Arthur, Tex 77640, Sec.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, Denver, Sept 23-29, 1974. Dene R Murray, One E Wacker Dr, Suite 1510, Chicago 60601, Exec Dir.

AMERICAN ASSOCIATION OF MEDICAL CLINICS, Washington, DC, Sept 4-8, 1974. James B Cobb, PO Box 949, Alexandria, Va 22313, Exec Off.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Hot Springs, Ark, Sept 4-7, 1974. Dr. J Donald Woodruff, Johns Hopkins Hospital, Baltimore 21205, Sec.

AMERICAN ROENTGEN RAY SOCIETY, San Francisco, Sept 24-27, 1974. Dr. Ted F Leigh, Emory University Clinic, Atlanta, Ga 30322, Exec Sec.

■ BLACKFORD MEMORIAL LECTURES, Denison, Sept 7, 1974. Dr. John D Gleckler, 211 N Fannin, Denison 76020, Chrmn.

FLYING PHYSICIANS ASSOCIATION, Biloxi, Miss, Sept 22-27, 1974. Albert Carriere, 801 Green Bay Rd, Lake Bluff, Ill 60044, Business Counsel.

■ TEXAS MEDICAL ASSOCIATION, Austin, Sept 20-22, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

■ TEXAS PEDIATRIC SOCIETY, El Paso, Sept 19-21, 1974. Mrs. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

WORLD MEDICAL ASSOCIATION, Stockholm, Sweden, Sept 1-8, 1974. Ms. Margaret L Natwick, World Medical Association, 10 Columbus Circle, New York 10019, Exec Sec.

OCTOBER

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Los Angeles, Oct 14-17, 1974. Roger Tusken, American Academy of Family Physicians, 1740 W 92nd St, Kansas City, Mo 64112, Exec Dir.

■ AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Dallas, Oct 6-10, 1974. Dr. C M Kos, 15 Second St SW, Rochester, Minn 55901, Sec-Treas.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, Cincinnati, Oct 15-20, 1974. J J Garvey, 2317 W Jefferson St, Suite 208, Joliet, Ill 60435, Exec Sec.

■ AMERICAN ASSOCIATION OF OPHTHALMOLOGY, Dallas, Oct 5-10, 1974. Lawrence A Zupan, 1100 17th St NW, Washington, DC, 20036.

AMERICAN CANCER SOCIETY, New York City, Oct 14-18, 1974. Lane W Adams, 219 E 42nd St, New York 10017, Exec VPres.

AMERICAN COLLEGE OF GASTROENTEROLOGY, Bal Harbour, Fla, Oct 21-26, 1974. Mr. Daniel Weiss, 299 Broadway, New York 10007, Exec Dir.

AMERICAN COLLEGE OF SURGEONS, Miami Beach, Oct 21-25, 1974. Dr. C Rollins Hanlon, American College of Surgeons, 55 E Erie St, Chicago 60611, Dir.

AMERICAN DIETETIC ASSOCIATION, Philadelphia, Oct 7-11, 1974. Robert M Crum, JD, American Dietetic Association, 620 N Michigan Ave, Chicago 60611, Exec Dir.

AMERICAN FRACTURE ASSOCIATION, Atlanta, Oct 20-23, 1974. Dr. H W Wellmerling, 600 Livingston Bldg, Bloomington, Ill 61701, General Sec.

AMERICAN MEDICAL RECORD ASSOCIATION, San Francisco, Oct 13-17, 1974. Mrs. Mary Waterstraat, 815 N Michigan Ave, Suite 1850, Chicago 60611, Exec Sec.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, Washington, DC, Oct 12-16, 1974. John W Andes, 515 Busse Hwy, Park Ridge, Ill 60068, Exec Sec.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Washington, DC, Oct 4-11, 1974. Dr. George F Stevenson, 2100 W Harrison, Chicago 60612.

■ AMERICAN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGEONS, Houston, Oct 27-Nov 1, 1974. Dallas Whaley, 29 E Madison, Chicago, Ill 60602, Exec VPres.

INTERNATIONAL CANCER CONGRESS, Florence, Italy, Oct 20-26, 1974. Dr. Murray M Copeland, M D Anderson Hospital and Tumor Institute, Houston 77025.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct 12, 1974. Carlie Umphres, PO Box 3276, Amarillo 79106, Exec Sec.

NOVEMBER

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, San Francisco, Nov 16-19, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN ASSOCIATION OF BLOOD BANKS, Anaheim, Nov 9-14, 1974. Ms. Lois James, 1828 L St NW, Washington, DC 20036, Exec Sec.

■ AMERICAN ASSOCIATION FOR RESPIRATORY THERAPY, Dallas, Nov 22-27, 1974. Winfield Singletary, 7411 Hines Pl, Dallas 75235, Exec Off.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, Washington, DC, Nov 4-6, 1974. Arthur E Auer, 241 E Saginaw, East Lansing, Mich 48823, Exec Dir.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, San Francisco, Nov 20-22, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN DENTAL ASSOCIATION, Washington, DC, Nov 10-14, 1974. C Gordon Watson, 211 E Chicago Ave, Chicago 60611, Exec Dir.

■ AMERICAN HEART ASSOCIATION, Dallas, Nov 18-23, 1974. William W Moore, 44 E 23rd St, New York 10010, Exec Off.

AMERICAN MEDICAL ASSOCIATION, Honolulu, Nov 30-Dec 4, 1975. American Medical Association, 535 N Dearborn St, Chicago 60610.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, New Orleans, Nov 5-10, 1974. F D Nowlin, 800 Washington Ave SE, Minneapolis 55414, Exec Sec.

AMERICAN SOCIETY OF CYTOLOGY, New York, Nov 6-9, 1974. Dr. Warren R Lang, Health Sciences Center, 130 S 9th St, Suite 1006, Philadelphia 19105, Sec-treas.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, Chicago, Nov 10-14, 1974. Dr. John A D Cooper, One Dupont Circle, NW, Washington, DC 20036, Pres.

INTERNATIONAL COLLEGE OF SURGEONS, Portland, Ore, Nov, 1974. Dr. Virgil T DeVault, 1516 Lake Shore Dr, Chicago 60601, Exec Off.

MEDICAL SOCIETY OF THE US AND MEXICO, Guadalajara, Mex, Nov 6-10, 1974. Mrs. Virginia E Bryant, 333 W Thomas, No 207, Phoenix, Ariz 85013, Exec Sec.

SOUTHERN MEDICAL ASSOCIATION, Atlanta, Nov 17-20, 1974. Robert F Butts, 2601 Highland Ave, Birmingham 35210, Exec Dir.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, Galveston, Nov 9-13, 1974. Donald C Jackson, 1905 N Lamar Blvd, Austin 78705, Exec Dir.

■ TEXAS MEDICAL ASSOCIATION, Austin, Nov 2-3, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

■ TEXAS NURSING HOME ASSOCIATION, Houston, Nov 20-22, 1974. Sidney D Rich, 6225 Highway 290E, Austin 78723, Exec VPres.

■ TEXAS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Houston, Nov 1-2, 1974. Dr. Bert A DeBord, Scott and White Clinic, Temple 76501, Sec.

DECEMBER

AMERICAN MEDICAL ASSOCIATION, Portland, Ore, Dec 1-4, 1974. Dr. Ernest B Howard, 535 N Dearborn St, Chicago 60610, Exec VPres.

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec 4-7, 1974. Mrs. Betty Suor, 1116 S 5th, Tacoma, Wash 98405, Exec Sec.

■ AMERICAN MEDICAL WOMEN'S ASSOCIATION, Houston, Dec 1-3, 1974. Dr. Claudine Moss Gay, 403 E Capitol St, Washington, DC 20003, VPres.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Dec 1-6, 1974. Miss Adele Swenson, 713 E Genesee St, Syracuse, NY 13210, Exec Dir.

SOUTHERN SURGICAL ASSOCIATION, Boca Raton, Fla, Dec 9-11, 1974. Dr. W Dean Warren, Emory University, Atlanta 30322, Sec.

■ TEXAS ACADEMY OF INTERNAL MEDICINE, Galveston, Dec 5, 1974. Dr. Tom W Duke, PO Box 3460, Amarillo 79106, Sec.

■ TEXAS SOCIETY OF INTERNAL MEDICINE, Galveston, Dec, 1974. Dr. Willis A Seyffert, Jr, 6006 N Mesa, #100, El Paso 79912, Sec-treas.

JANUARY

■ TEXAS MEDICAL ASSOCIATION, Austin, Jan 17-19, 1975. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Dir.

■ TEXAS SOCIETY OF PATHOLOGISTS, El Paso, Jan 24-26, 1975. Dr. John A Webb, 704 Medical Towers, Houston 77025, Sec.

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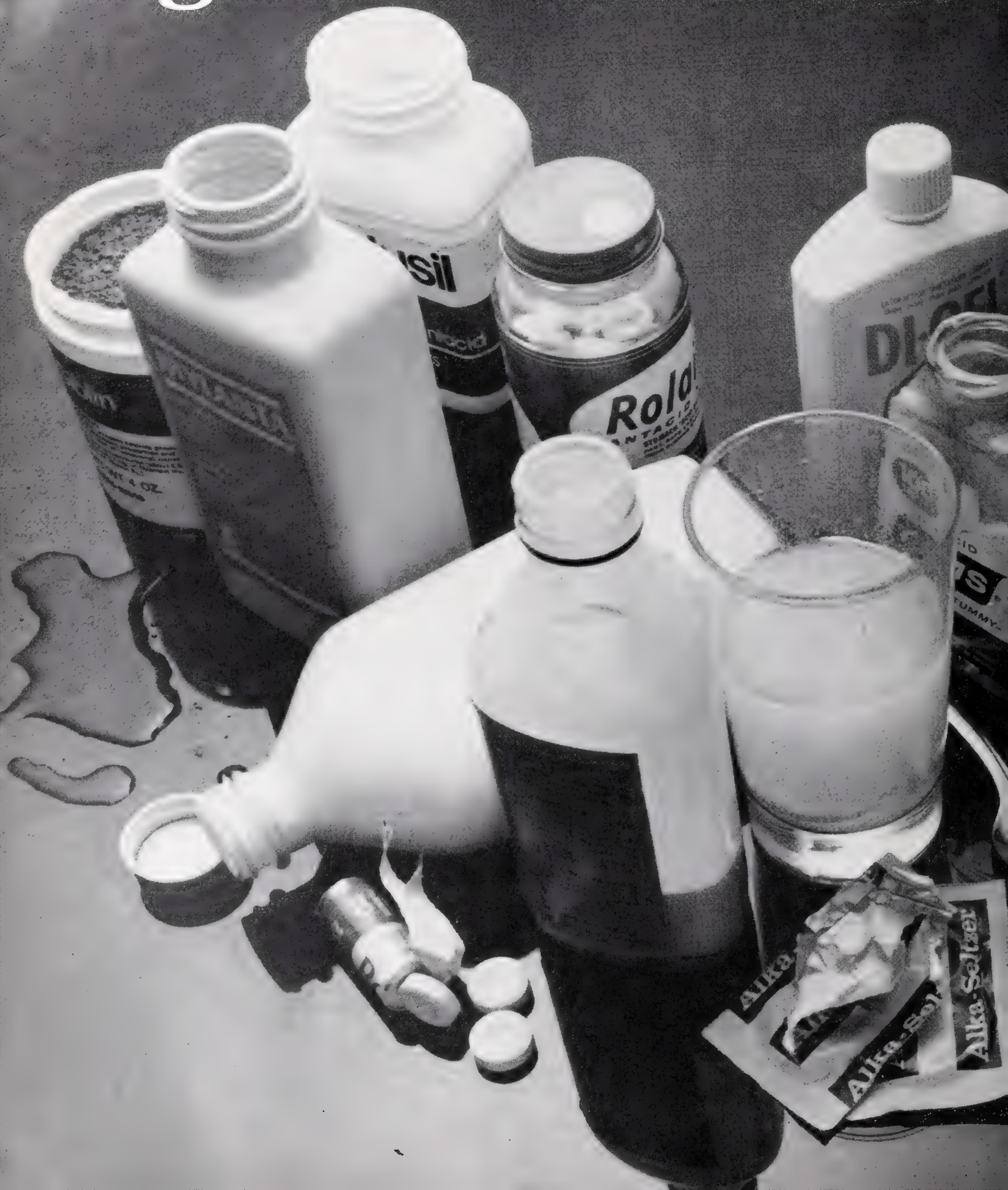

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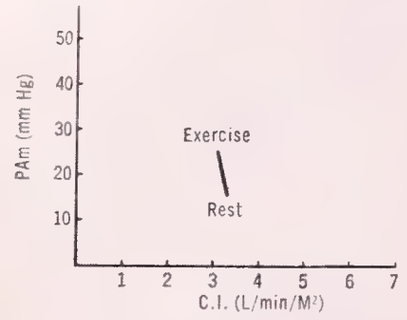
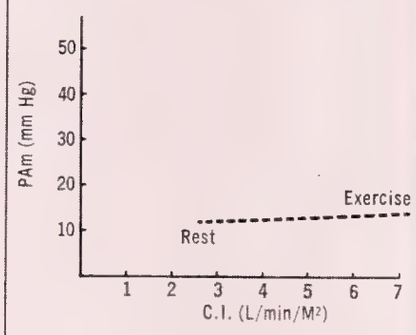
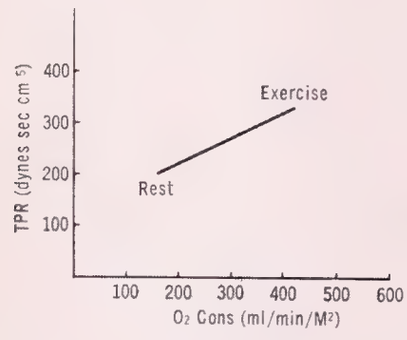
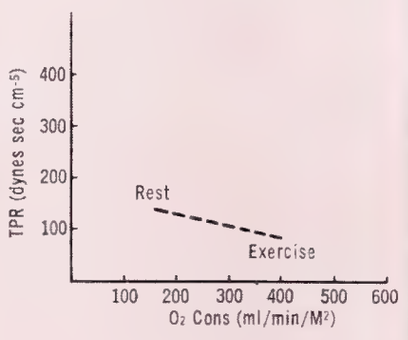
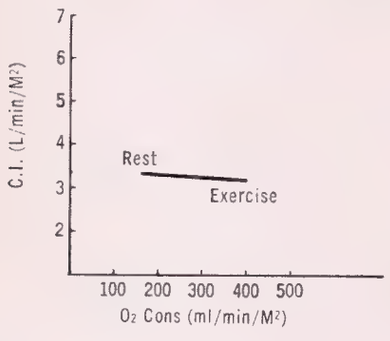
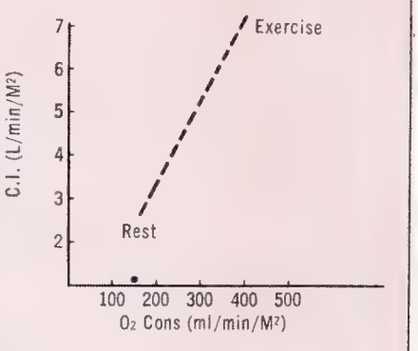
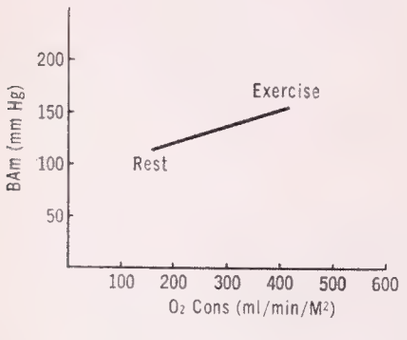
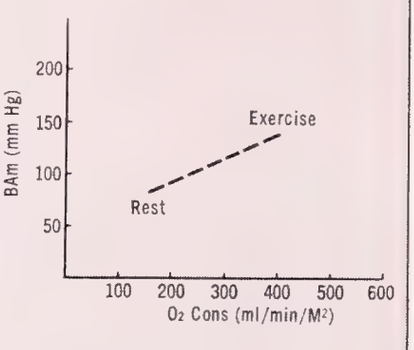
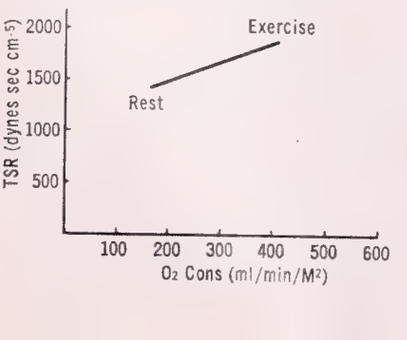
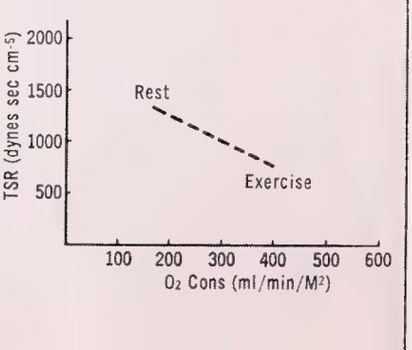
	PULMONARY ARTERY (MEAN PRESSURE)	
	TOTAL PULMONARY RESISTANCE	
	CARDIAC INDEX	
	BRACHIAL ARTERY (MEAN PRESSURE)	
	TOTAL SYSTEMIC RESISTANCE	

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Adapted from: Kasparian H, Najmi M, Likoff W: Laboratory Evaluation of Coronary Artery Disease. Scientific Exhibit, AMA Convention, Chicago, Ill, June 1966.

CONTINUING EDUCATION COURSES

JUNE

Cardiology
Title: Cardiac Drugs—A Therapy Seminar; Evaluation of the Patient with Coronary Artery Disease
Sponsors: American Heart Association, Texas Affiliate, Inc, Austin; UT Southwestern Medical School at Dallas
Location: Sheraton Fort Worth Hotel, Fort Worth
Date: June 21, 1974
Fee: $15 members; $20 nonmembers
Credit: 6 elective hours AAFP
Contact: Dudley H Hafner, Executive Director, American Heart Association, Texas Affiliate, Inc, PO Box 9928, Austin 78766

Hematology
Title: Clinical Hematology
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: June 1-2, 1974
Fee: $65
Credit: 8 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Ophthalmology
Title: Bi-Monthly Clinical Conference in Ophthalmology
Sponsors: UT Health Science Center at Dallas
Location: Parkland Memorial Hospital, Dallas
Date: June 19, Oct 16, Nov 20, 1974
Fee: None
Credit: None
Contact: Dr. John Lynn, Chairman, Dept of Ophthalmology, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Title: Ultrasonography in Ophthalmology
Sponsors: UT Medical School at Houston
Location: Hermann Hospital, Houston
Date: June, 1974
Fee: None
Credit: None
Contact: Dr. Charles Garcia, 6436 Fannin, Suite 403, Houston 77025

Otolaryngology
Title: Hearing and Not Hearing—A Short Course
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: June 22, 1974
Fee: $40
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Statistics
Title: 16th Annual Graduate Summer Session of Statistics in the Health Sciences
Sponsors: UT School of Public Health, Houston; United States Public Health Service
Location: UT School of Public Health, Houston
Date: June 20-Aug 2, 1974
Contact: Summer Session of Statistics, UT School of Public Health, PO Box 20186, Astrodome Station, Houston 77025

JULY

Ophthalmology
Title: Ophthalmology for Family Physicians
Sponsors: Texas Society for the Prevention of Blindness; UT Health Science Center at Houston, Medical School Program in Ophthalmology
Location: North and South Auditorium, Hermann Hospital, Houston
Date: July 20, 1974
Fee: $10
Credit: 6 prescribed hours AAFP
Contact: Joanne Allen, Program Director, Texas Society for the Prevention of Blindness, 3617 Fannin, Houston 77004

Radiology
Title: External Beam, Interstitial and Intracavitary Dosimetry—Principles
Sponsors: UT Health Science Center at Houston; M D Anderson Hospital and Tumor Institute, Houston
Location: M D Anderson Hospital and Tumor Institute, Houston
Date: July 1-12, 1974
Fee: $280
Contact: Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

AUGUST

Dermatology
Title: Dermal Pathology
Sponsors: UT Health Science Center at Houston
Location: Shamrock Hilton Hotel, Houston
Date: Aug 19-23, 1974
Fee: $200
Designed for: Pathologists and Dermatologists
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, PO Box 20367, Houston 77025

Medical Electronics
Title: Clinical Applications of Medical

Electronics
Sponsors: Texas Tech University School of Medicine; Texas Tech University College of Engineering, Lubbock
Location: Texas Tech University School of Medicine, Lubbock
Date: Aug 2-4, 1974
Contact: Dr. Orene W Peddicord, Coordinator, Continuing Medical Education, Texas Tech University School of Medicine, PO Box 4569, Lubbock 79409

Pediatrics
Title: Psychological Assessment of Children
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Aug 3, 1974
Fee: $40
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Designed for: Pediatricians
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Research
Title: Current Trends in Clinical Research Technique
Sponsors: UT Health Science Center at Houston; UT System Cancer Center MD Anderson Hospital and Tumor Institute Houston
Location: M D Anderson Hospital and Tumor Institute, Houston
Date: Aug 9-10, 1974
Contact: Office of the Director, UT Health Science Center at Houston, Division of Continuing Education, PO Box 20367, Houston 77025

SEPTEMBER

Gynecology
Title: The Great Debates in Gynecological Endocrinology and Infertility
Sponsors: Dept of Obstetrics and Gynecology, Baylor College of Medicine, Houston
Location: Baylor College of Medicine, Houston
Date: Sept 20-21, 1974
Guest Speakers: Dr. Robert W Kistner, Dr. Nichols Vorys, Dr. Michael E Yannone, Dr. Joseph W Goldzieher, Dr. Richard P Dickey, Dr. Rudi Ansbacher, and Dr. George T Schneider
Fee: $50
Contact: Dr. Veasy C Buttram, Jr, Dept of Obstetrics and Gynecology, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Internal Medicine
Title: Advanced EKG Course
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Sept 13-14, 1974
Fee: $75
Credit: 10 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Designed for: Internists
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Neurosurgery
Title: Deciding on Neurosurgery
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Sept 20-21, 1974
Fee: $65
Credit: 10 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Obstetrics and Gynecology
Title: Prostaglandins
Sponsors: UT Health Science Center at Houston; Baylor College of Medicine, Houston
Location:
Date: Sept 19, 1974
Contact: Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

Psychiatry
Title: Helen Scott Saulsbury Lecture in Psychiatry—"Children and Child Rearing in America Today"
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Sept 27, 1974
Guest Speaker: Dr. Benjamin Spock
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

Surgery
Title: G V Brindley Lecture in Surgery
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Sept 3, 1974
Guest Speaker: Dr. William C Cantey, University of South Carolina
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

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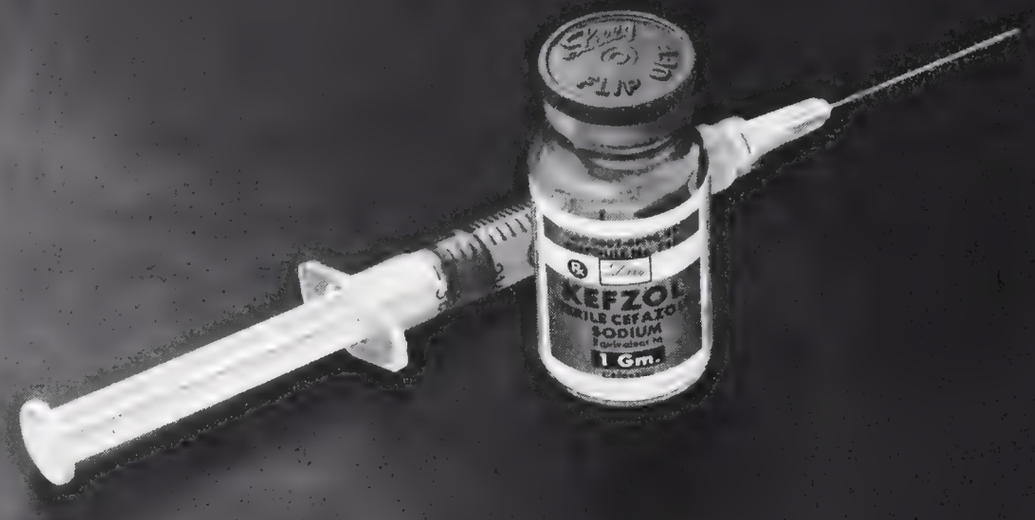

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Preventing coronary heart disease: The pediatrician's role

M. F. Graham, MD

Detecting risk factors of coronary heart disease in the pediatric population is a major step toward controlling this modern epidemic. With respect to screening for certain of the risk factors, current trends among some 80 practicing pediatricians in a Texas metropolitan area were assessed by means of brief questionnaire. Seventy-seven percent of these pediatricians screen for hypertension by the time the patients are five years old. Screening for family histories of premature cardiovascular disease is done less regularly (58%), and followup of significant family histories with appropriate biochemical screening of progeny is done to an even lesser extent (25%). The urgent need for total involvement of pediatricians in preventing coronary heart disease is stressed.

Introduction

Coronary heart disease (CHD) is the nation's number one killer; one in five American males will suffer a myocardial infarction before age 65; the death rate from CHD in middle-aged women is rising; and there is a better than even chance that a person's first heart attack will be his last. However, recognition of CHD as a pediatric disease only recently has received due emphasis, even though the concept was introduced nearly 15 years ago.[1] Pathogenetically speaking, there is ample evidence that the atherosclerotic process underlying CHD is a pediatric one.[2] Therefore, pediatricians should heed such authoritative declarations as, "Atherosclerosis has its origins in infancy and childhood."[3]

Atherosclerosis as a Pediatric Process

According to some pathologists, evidence for atherosclerosis may be found in the arteries of young infants.[4-7] Fatty streaking of aortic intimae has been noted in all children beyond age three in a diversity of populations in different areas of the world, including countries with a low incidence of coronary heart disease.[8-11] Although assumed by some to be a normal process,[12] since it is not peculiar to populations with a high incidence of coronary heart disease, fatty streaking is believed by others to represent the first gross evidence of the atherosclerotic process.[5] Apparently reversible in itself, fatty streaking seems nonetheless to be the nidus from which the characteristic lesions of atherosclerosis spring in susceptible populations. In societies where CHD is prevalent, it is during the second and especially the third decades of life that such streaking appears to progress beyond this initial phase to one of fibrosis and plaque formation and to involve the coronary arteries.[13-15] What causes streaking to advance to irreversible stages in some populations and not in others forms the basis for much epidemiologic investigation. The answer seems to lie in the proper combination of certain genetic and environmental factors.

One study[16] revealed that by age five, only one-third of the children examined (after death from causes other than heart disease) had normal coronary blood vessels; after age 15 such normality was "rare" and "dangerous" lesions were encountered.

Atherosclerotic lesions have been found in the coronary vessels of teen-agers in this country.[14,15] In the now-famous Korean War study, of 300 soldiers killed in combat (average age 22 years), postmortem study revealed evidence of coronary disease varying from slight thickening of the artery lining to complete occlusion of one or more

main branches in 77%.[13] Such a study is a most convincing example of what may transpire in coronary arteries during the pediatric years in susceptible populations.

Epidemiologic Aspects of Atherosclerosis with Pediatric Implications

Familial Aspects

The tendency of premature atherosclerotic heart disease to cluster in families has been documented repeatedly.[17,18] A clear correlation exists between the presence of risk factors in children and increased mortality from CHD in parents.[18] Whether or not such findings represent the passage from one generation to the next of genetic traits or of environmental habit patterns, or both, is by no means clear.

On the other hand, the genetic linkage of certain of the risk factors in atherosclerosis—such as the familial types of hyperlipoproteinemia—is obvious.[19,20] Animal studies further corroborate genetic influences on blood lipids.[21-24]

The essential type of hypertension, another highly important risk factor, also tends to concentrate in families;[25-27] the progeny of hypertensive parents run twice as much risk of developing hypertension as those of normotensive parents.

Obesity, with its increased incidence of hyperglycemia, hyperlipidemia, and hypertension (at least in adults 25% or more overweight), likewise shows familial aggregation.[28,29] If one parent is obese, 40 to 50% of the children will become obese; if both parents are obese, the incidence of obesity in offspring rises to 70 to 80%. At least 80% of obese children will remain so in adulthood. Recent evidence indicates that the obese child has more adipocytes, perhaps from birth or at least from early infancy, than his nonobese peer.[28] Moreover, his adipocytes probably have a greater individual capacity for fat storage. These same cellular traits are commonly possessed by his obese parents.

The genetic aspects of diabetes are too well known to more than mention here.

Such data suggest that whatever contributory factors are operative in the genetically susceptible adult are also operative in the genetically susceptible pre-adult. There is no logic in dividing a coronary-prone population into involved and non-involved segments on the basis of age alone. One simply cannot draw an age line, as it were, which separates the young, non-involved arteries on the one side from the older, involved vessels on the other.

At-Risk Populations

The tendency of ischemic heart disease to occur with high incidence in certain populations and with low incidence in still others has formed the basis for numerous epidemiologic studies. Whether in a given population the aforementioned progression of the fatty intimal streaks seen in childhood represents primarily the continuous application of endogenous forces ongoing from birth, or whether it is chiefly due to an encounter with new (exogenous) forces (such as stress, relative physical inactivity, smoking) which come into play in the second and third decades, is not clear. In the former event, atherosclerosis is all the more obviously a pediatric process. In the latter case, it is pediatric in the sense that "genetically sensitized" individuals must be singled out of an at-risk population before the catalytic forces come into play later in life.

Increasing Attack Rate in Younger Age Groups in At-Risk Populations

Clinically, atherosclerotic heart disease is becoming increasingly manifest in younger age groups. Considered in pre World War II days a disease of old age, it has attained recognition as a killer of middle-aged adults, especially males.[30-31] In 1968 the ratio of deaths due to ischemic heart disease in males and females in the 45 to 64 age group was 3 to 7, and in the 35-49 age group 5 to 1, as compared to a ratio of only 1 to 1 in 1920.[31] This change reflects primarily a large increase in the male death rate from ischemic heart disease. Since 1950 alone the coronary death rate has increased 14% for men between 25 and 44.

The growing attack rate of ischemic heart disease in increasingly younger age groups parallels the complexity, stress, and physical laxity of the society which "breeds" it.[32-34] Sudden death from ischemic heart disease at age 40 reflects forces that are incipient but pathologically active at age 20, or quite possibly at age 10.

Parallel Risk Factors in Different Age Groups

The increasing involvement of younger age groups with manifest atherosclerotic heart disease suggests that whatever environment is conducive to the development of atherosclerosis may affect pre-adults as well as adults. Similarly, there is evidence that in populations susceptible to CHD, the high incidence of factors predisposing to atherosclerotic heart disease in older adults extends downward into even younger groups in a somewhat parallel fashion. Although individual factors may not of themselves be associated with a high incidence of atherosclerotic heart disease—eg, hypertension is prevalent in the Japanese, yet atherosclerotic heart disease is comparatively uncommon—yet their common presence up and down the age scale of a population-at-risk cannot be ignored.

Thus obesity is estimated to be present in 20 to 25% of American adults. Similarly, it is estimated to affect 10 to 20% of children in the USA.[35]

Essential hypertension affects some 20 to 40 million adult Americans. The precise incidence of this disease in the first two decades of life is not known. However, when hypertension is first encountered in an older child, it is far more likely to be of the essential type, as in adults.[36] Also, in such instances, hypertension is commonly present in the parent(s). This is in contradistinction to its presence in the young child in whom identifiable and ofttimes remediable lesions are much more likely to be an etiologic factor.[37]

No mass data are available on the incidence of hyperlipidemia in children. However, cholesterol levels in children and their parents have shown significant correlation.[20,38] The early introduction of American children to dietary customs known to be conducive to the production of hyperlipidemia (at least in so-called hyper responders) heightens the probability that parallelism of this factor between adults and children most likely does exist.[39,40] Some studies suggest that cholesterol levels in children in this country rise steadily during the first two years, strike a relative plateau until late adolescence, and then rise steadily again until age 50 to 55.[8] Still other studies[41] indicate a more steady rise in serum cholesterol levels with age throughout childhood, with any given child tending to maintain a level at the same percentile. But in nonsuscep-

tible populations, blood lipid values up and down the age scale are, on the average, lower than in susceptible populations. Although cord cholesterol values must be assessed with care,[42-44] recent work has shown that lipid aberrations are present in a significant number of babies even at birth. Further, groups of hypercholesterolemic infants fed in the customary manner during the first year of life, when compared with groups on a low-fat, low-cholesterol dietary regimen during the same period, have shown significantly higher lipid levels at the end of the first year.[45] Prudent diets have been shown to possess cholesterol-lowering effects in older pediatric age groups, as well.[46] In fact, in all age groups studied, prudent diets have in general a lipid-lowering effect,[45-48] a most important consideration if cholesterol is indeed as atherogenic as many investigators claim.[39] And, there is evidence that the higher the blood cholesterol level before coronary disease appears, the younger the age of onset.[49]

That hypertensive and/or coronary-prone "personality types" exist in children is obvious, but the age incidence of such personality manifestations is difficult to assess accurately in children.

On the whole, since children are physically active and unfettered by what many adults consider more important life pressures, such as "making a living," it is difficult to compare the pediatric age group accurately with the adult population as regards physical activity habits. Relatively high levels of physical activity are the rule in children through maturity.[50] Manifest atherosclerotic heart disease begins to appear with crescendo-like regularity in the 20-30 age group, when most American males marry and desert their former physically active status for the more sedentary necessities and pressures of providing for a family.

Between 1968 and 1970 cigarette smoking in the US increased for teen-agers, both male and female, at every age level. In January 1968 an estimated 3 million US teenagers smoked. By January 1970 the estimate was 4 million.[51] Inasmuch as some 70% of adolescent smokers may continue to do so in adult life, this increased cigarette smoking among adolescents deserves investigation.[52-54]

Other conditions being constant, risk factors ominous during adult life, in terms of atherosclerosis, can hardly be less ominous in the early years of their existence, even though the eventual magnitude of their damaging effect may be more difficult to evaluate.

Prevention as Key in Controlling CHD

Most authorities on atherosclerotic heart disease today agree that the answer to the coronary heart disease problem lies in prevention.[55,56]

With the advent of each new procedure, the surgical treatment of atherosclerotic heart disease continues to encounter cycles of acceptance and disfavor, with no procedure currently enjoying wholehearted endorsement as a solution. Cardiac transplantation has been relegated to experimental status, at least until the problem of tissue rejection is solved. The currently popular technique of saphenous vein aorto-coronary by-pass is looked upon, even by a majority of surgeons, as a procedure to be reserved for a very select group of cases with advanced coronary involvement.

The problem would seem to lie basically in the fact that surgeons and internists alike are busily engaged with the end-stages of a long-term, insidious process

that has been allowed to creep inexorably toward its end-point over preceding decades of life. Such is akin to attempting to save a forest ablaze from rim to rim instead of snuffing out the sparks that began the conflagration.

Early Prevention: Recognizing its Urgency

If prevention be the answer to the problem, then the earlier it is instituted the better.[38,57-59]

Early prevention requires early detection of risk factors, and therefore the early use of all screening techniques available and feasible becomes a must for every physician engaged in the care of children.

Screening for Risk Factors in Atherosclerosis

In a report by the National Heart and Lung Institute Task Force on Atherosclerosis in June 1971, specific recommendations included the establishment of large national centers for prevention of atherosclerosis, centers which would, among other things, "actively engage in the screening of populations in order to identify persons of all ages who manifest the presence of risk factors or overt atherosclerosis." [59] Such centers, owned and funded by the government, would be established in the vicinity of a university or medical center. Private or federal grants would be obtained for additional support.

Also recommended was that cardiovascular disease prevention clinics (initially five to ten) be established within the framework of existing medical care, teaching, and investigative programs. Among the primary goals of such clinics would be to develop efficient methods of detecting persons at increased risk of atherosclerosis, and to develop improved methods of intervention for each of the major risk factors.

Further, the Task Force recommended "a new concentration of effort to alert physicians concerning risk factors as they appear in childhood and young adulthood."

Continuous screening of a huge population for a multiplicity of factors is a herculean task, and would require the full weight of an ambitious federal program to do the entire job.[60] While such a program is to be commended and supported, it should be equally clear that its sheer magnitude bespeaks the even greater weightiness of the problem which faces it. All the medical manpower both now and in the foreseeable future should be brought into play as soon as possible. The more vast a program, the greater the inertia which must be overcome to put it in motion. Moreover, history has shown that the greatest victories in medicine have not been products of government edict. Should a large segment of private practitioners peculiarly adapted to the application of early (pediatric) screening and/or intervention against atherosclerosis be content to assume a "let-Uncle-do-it" attitude? There is enough existing knowledge to afford an effective springboard for immediate action, and knowledge gaps afford an excellent opportunity for the cautiously inquisitive clinician to make significant contributions. Should not, then, every practitioner dealing with children adopt a preventive stance and become involved as much as knowledge and skill and time will allow?

Trends in Pediatric Screening

In an effort to determine a "trend" among practicing pediatricians toward

screening of their patients for risk factors associated with atherosclerosis, a brief questionnaire was sent to some 80 practicing pediatricians in the Dallas area, of which some 76 replied. Although such a small sample may have no large-scale significance, it may well reflect pediatric practice (with reference to screening for risk factors) on a broader scale.

Of the physicians reporting, 67% said they did blood pressure determinations during routine visits on all patients cooperative enough to permit accurate readings.

Almost all respondents determine blood pressures on their patients at some time during the pediatric age period. Though only four reported taking blood pressures in all age groups, 77% make determinations by the time the patient is five years old. Some 12% did not do routine blood pressure determinations on children under age ten. It appeared that a strong family history of hypertension correlated with the tendency to measure blood pressure in patients, as only 16.6% of the physicians queried failed to take blood pressures in their patients in the face of a positive family history.

Over 58% of the respondents reported routine inquiry as to a family history of premature cardiovascular disease, but only some 25% did biochemical screening for risk factors (such as hyperlipidemia, or hyperglycemia) even in the face of a strong family history. Only two of the group reported routine screeening for hyperlipidemia in all patients as early in life as possible.

The survey findings suggest that in terms of risk factor screening for atherosclerosis, pediatricians do a good job in detecting hypertension, and are equally alert to the problems of obesity, overt diabetes, and secondary hyperlipidemias (eg, those associated with hypothyroidism and nephrosis). They may be somewhat remiss in screening the family history for premature cardiovascular disease, and even more so in a follow-up of significant family histories with biochemical data on progeny.

Comment

The first duty of any participant in the war against atherosclerosis is to detect the individual at highest risk of developing the disease. This is no less true of the pediatrician. Certainly there seems to be room for "belt-tightening" in the realm of screening for positive family history, and in follow-up of such histories with biochemical screening of the pediatric patient in such families.

The most common rejoinder against screening for coronary risk factors in pediatric patients is simply that there is not enough time. However, inasmuch as blood pressure determinations are done with much greater frequency than a scan of family history with appropriate follow-up, and even though the latter technique, properly instituted, requires no more doctor time (if as much) than the former, time would not appear to be the only factor involved. True enough, detailed inquiry into every family background may have to take a back seat to more obvious pediatric duties on any given day. But the ongoing intent to screen at future visits where and whenever possible can yield satisfying results. The number of unsuspected cases of hypertension and hyperlipidemia, for example, which one can turn up over a relatively short period is truly surprising and gratifying.

Routine lipid determinations on all

pediatric patients as early in life as possible is desirable, not only to detect hyperlipidemia, but also, when detected, to initiate screening of the entire family when such has not been done. Such a procedure is especially worthwhile in the progeny of relatively young parents, since many such parents are not aware of the presence of lipid aberrations in themselves.

It should be remembered that slight elevations of lipids in childhood commonly become moderate elevations in later years. If any degree of hyperlipidemia is a major risk factor for atherosclerotic heart disease in adults—and most cardiologists think that it is—why should it be considered any more lightly in children? It is in early childhood that proper eating habits are formed. It is therefore within the power of the pediatrician to help modify, within safe boundaries, the eating habits of a populace-at-risk when modification exerts its most beneficial effect. This, it would seem, is prevention at its ultimate. Moreover, mild elevation of a lipid in early childhood should at least set the stage for periodic recheck and an on-guard attitude for the appearence of other risk factors. Finally, the more interested pediatrician has a golden opportunity to initiate prospective studies and accumulate longitudinal data which can be passed on to the internist who eventually takes over his patient. Such an amalgamation of pediatric and internal medicine disciplines in a common cause can, in time, yield highly valuable information.

To await the final proof of the role of lipids in atheroschlerotic heart disease before instituting appropriate screening and intervention measures is to ignore reams of convincing data. Procrastination in the use of current information is a condemnation of many to premature death from atherosclerotic heart disease. Similarly, failure to apply this knowledge to children allows certain patterns of eating, physical activity, and leisure-time usage to be formed which, if modified early, might well have added years to life, or converted later crippled years into full and useful ones.

Practitioners dealing with adults have been screening their patients for coronary heart disease and/or associated risk factors for many years. But those dealing with children have been slower to adopt available screening techniques, and for obvious reasons. Most physicians have not been schooled to do so. Medicine-at-large has heretofore designated atherosclerotic heart disease an adult disease. Only in recent years has it been recognized as a disease of children. Also, the great bulk of pediatricians' sick practice is directed at more fulminant diseases—those whose course is run in days, weeks, or at most, months. Thus atherosclerotic heart disease is by its very nature "foreign" to the customary thinking of the practicing pediatrician. Finally, prevention is to the average pediatrician an immunologic phenomenon capable of titration and the use of precision parametry. The gray zones in the cause and prevention of atherosclerosis thus pose the necessity of total "retooling" of his approach to disease prevention. For example, the great majority of blood pressures which the pediatrician measures will be normal. Few will be high. But a sizeable number will be "borderline," of "questionable significance"—ie, in the "gray zone." In essence the average pediatrician, in his hurried and harried practice, needs more clear-cut guidelines for deciding: "What level of blood pressure in a given child con-

stitutes hypertension?" "What level of serum cholesterol in a given patient signifies hypercholesteremia?" "At precisely what level of blood pressure should one intervene in a certain child?" "At what cholesterol level?" The answers to some such questions must await the outcome of prospective studies, in which many practicing pediatricians may become involved. The answers to still other of such questions are being sought by pediatricians even today. For example, Londe[61,62] has made a good inroad toward establishing blood pressure norms in children, and Friedman and Goldberg[41] toward establishing cholesterol norms. Thus may the pediatrician seize upon the opportunity to aid in eradicating "gray zones," in clearing the fog that enshrouds many of the areas involved. Every practicing pediatrician is obligated to be on speaking terms with pediatric literature relating to atherosclerosis. He must realize that although familial hyperlipoproteinemia may be discovered in only one in 150 o · 200 attempts, in terms of yield it will still pay off more handsomely than, for example, screening for phenylketonuria (one in 10,000 to 20,000).

With an open mind, sufficient background data and cause now exist for the pediatrician to practice atherosclerosis prevention with as much zeal of he administers immunizations against communicable diseases. Certain screening tools are neither too expensive nor too time-consuming to preclude their use on a routine basis. The Baumanometer can be utilized as regularly as are scales. Family histories relative to atherosclerotic heart disease can be obtained on a short printed form. A strong familial tendency toward premature atherosclerotic heart disease (especially in first-degree relatives under age 60), can be pursued by determining serum cholesterol and triglyceride levels, regardless of the age of the patient. Elevation of either or both of these entities may warrant electrophoretic lipoprotein typing[19] of the patient's serum. Gout in the family warrants screening for hyperuricemia. It is not unusual to discover a risk factor present in a child (for example, hypertension) also present in, but unknown to, a parent. Thus may pediatric screening bear fruit in retrograde fashion for the entire family.

Today's pediatrician must realize that atherosclerosis is a pediatric problem in which he may play a vital role in solution and eventual control. What he needs as much as a ready set of facts is a ready state of mind.

Intervention

Of the mosaic of factors, some genetic and some environmental, which lead to endstages such as narrowing or occlusion of individual arteries, it is by no means clear which of the factors are most important. Clearly, however, certain factors (such as genetic flaws, maleness, age, and body build) are not subject to manipulation, whereas others (such as diet, blood pressure, physical activity, stress, and cigarette smoking) are. It is to this latter group that one must direct attention in intervention, just as in screening.

Intervention in the course of certain factors such as obesity and hyperglycemia poses relatively less of a problem, both as to how and when, than does intervention in others such as hypertension or hyperlipidemia.

Decision as to precisely when and how to intervene against essential hypertension is a problem still debated even for

adults. In adults, diastolic pressures greater than 115 seem to uniformly beget treatment. Whether to treat diastolic pressures in the "gray zone" depends, it seems, largely upon the experience, training, and background of the physician. Similar quandaries exist for systolic pressures. For children, reliable treatment guides are even more scarce. Two conflicting points of view seem extant: (1) that there is more room for laxity in treatment of hypertension in children because of age, and (2) that one should intervene early in life against even questionable levels of hypertension because it may be possible to "reset" a child's "barostat" if intervention is instituted early enough. Hyperlipidemia, hyperuricemia, and hyperglycemia must first be eliminated as coexisting factors. Recent classification and sub-classification of essential hypertension on the basis of low, normal, or high plasma renin levels, and/or low, normal, or high plasma aldosterone, has permitted a more erudite and critical approach to the management of essential hypertension, itself a multifactorial disease, in adults.[63] Such classification may lend itself to application in children. Until such time as treatment guidelines in children are more accurately established, the practitioner must adopt a middle-of-the-road policy, individualizing each case as to family history, presence of other risk factors, age, and pressure range before drug treatment is begun. At the very least, counselling in life styles, abolition of the salt-shaker, and instruction in minimizing stress and adopting a well-tailored fitness program seem warranted. It would seem that the burden of proof that early intervention against hypertension will not alter the atherosclerotic process rests on the physician who withholds treatment.

The detection of familial types*[19] of hyperlipoproteinemia, in particular, of which type 2 (characterized by elevated cholesterol and low-density lipoproteins in the presence of similar findings in first-degree relatives) is the most common, constitutes clear grounds for institution of dietary treatment, certainly beyond age two.[43,64-67] Because of the uncertain effects on growth and development of altered fat intake in infancy and childhood, dietary modifications in the early years require careful medical supervision and are best reserved for familial hyperlipoproteinemia with extremely high lipid levels. Use of hypocholesterolemic drugs in children likewise should be reserved for cases at extreme risk, as indicated by family history, high lipid levels, and the presence of other risk factors.

Nonfamilial hyperlipidemias, if not secondary to some underlying disease such as hypothyroidism or nephrosis, and if characterized by only modest elevation of cholesterol levels, are usually left untreated at present. In this regard, however, one wonders if reticence to institute dietary management in even moderate degrees of hypercholesterolemia is any more justifiable than the accepted use of quite severely restricted diets in young infants with severe food and milk allergies, for example.

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*It may well be that, in adults, lipoprotein typing is superfluous in the detection and management of familial hyperlipidemias, and that simple cholesterol and triglyceride determinations, along with a careful family history, give all the information necessary. However, children, as opposed to adults, possess increased amounts of alpha-lipoprotein cholesterol along with proportionately decreased amounts of beta- and pre-beta-lipoprotein cholesterol. Therefore lipoprotein typing is more essential to proper assessment of the significance of elevated serum lipids in the pediatric patient.

Moderate elevations in serum triglycerides usually respond to normalization of weight in obese patients, and unless attended by hyperglycemia seldom call for imposition of strict dietary measures. The coexistence of abnormal glucose tolerance, which should alert one to the possibility of a type 4 familial hyperlipoproteinemia, calls, of course, for appropriate dietary management.

A firm denouncement of cigarette smoking under whatever circumstances it is detected (for example, during allergy investigation) often bears much fruit through an entire family.

Careful prescription of a physical activity program in cases of mild to moderate hypertension, in hyperglycemia, and in obesity, in particular, often provides the basis for involving an entire family in a healthy (if properly tailored) fitness program.

Summary

Viewed from an etiologic standpoint, atherosclerosis is a pediatric disease. From the perspective of prevention, wherein lies the primary hope of curtailing the disease, it therefore deserves as much, if not more, attention in pediatric age groups as it currently receives in disciplines dealing with adults. Despite the many unknowns which remain concerning the disease, there now exist sufficient data to warrant the early use of screening and, in many instances, intervention techniques (such as behavior modification, prescription of diets, exercise, and proper medication) by the pediatrician or generalist. In the case of many such practitioners, such will necessitate a reeducation of thought processes coupled with a flexibility of mind and purpose characteristic of the *avant-garde* clinician.

While the total impact made by any one group on the problem, vast and complex as it is, may be comparatively small, still no contribution to its solution and/or control can be considered insignificant. Certainly, in the light of current evidence, no all-out effort against coronary heart disease can be complete without the wholehearted support and participation of the pediatric community. The unique opportunity for the pediatrician to accumulate helpful data (eg, to establish norms), evaluate older screening techniques and perhaps originate new ones, and to establish more reliable criteria for intervention, is one which he cannot afford to ignore. Moreover, the pediatrician is in a singularly advantageous position to couple detection of risk factors in children with immediate intervention, where indicated, an inherently weak link in programs involving screening alone. The very nature of the atherosclerotic process dictates that the pediatrician must, sooner or later, become intricately involved in its eventual control.

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ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.
Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.
USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.
For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.
Eaton Agent pneumonia: 900 mg daily for six days.
Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.
Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.
Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.
In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.
In streptococcal infections, a therapeutic dose should be given for at least 10 days.
SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73

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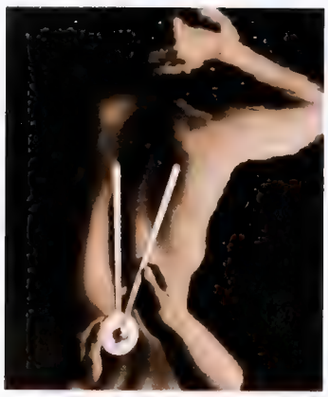

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* **Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:

"Possibly" effective: for symptomatic relief in conditions characterized by skeletal muscle spasm and mild to moderate pain.

Final classification of this indication requires further investigation.

Contraindications: Acute intermittent porphyria and allergic or idiosyncratic reactions to carisoprodol or related compounds such as meprobamate, mebutamate, tybamate.

Warnings: *Idiosyncratic Reactions:* Rarely, first dose has been followed by extreme weakness, transient quadriplegia, dizziness, ataxia, temporary vision loss, diplopia, mydriasis, dysarthria, agitation, euphoria, confusion, disorientation. Symptoms usually subside during the next several hours. Supportive and symptomatic therapy, including hospitalization, may be necessary.

Pregnancy and Lactation: Safe use not established; weigh potential benefits against potential hazards in pregnancy, nursing mothers, or women of childbearing potential.

Children Under Five: Drug not recommended.

Potentially Hazardous Tasks: Driving a motor vehicle or operating machinery.

Additive Effects: Possible additive effects between carisoprodol alcohol, and other CNS depressants or psychotropic drugs.

Drug Dependence: Use cautiously in addiction-prone patients.

Precautions: To avoid excess accumulation, use caution in patients with compromised liver or kidney function.

Adverse Reactions: *Central Nervous System:* Drowsiness, dizziness, vertigo, ataxia, tremor, agitation, irritability, headache, depressive reactions, syncope, insomnia.

Allergic or Idiosyncratic: Usually seen after 1-4 doses in patients not previously exposed, e.g., rash, erythema multiforme, pruritus, eosinophilia, fixed drug eruption with cross reaction to meprobamate. More severe manifestations: asthma, fever, weakness, dizziness, angioneurotic edema, smarting eyes, hypotension, anaphylactoid shock. Stop drug, treat symptomatically (e.g., possible use of epinephrine, antihistamines, and in severe cases corticosteroids).

Cardiovascular: Tachycardia, postural hypotension, facial flushing.

Gastrointestinal: Nausea, vomiting, hiccup, epigastric distress.

Hematologic: Leukopenia and pancytopenia (on carisoprodol plus other drugs).

Usual Adult Dosage: One 350 mg tablet three times daily and at bedtime.

Overdosage: Has produced stupor, coma, shock, respiratory depression, and, very rarely, death. Overdosage of carisoprodol plus alcohol or other CNS depressants or psychotropic drugs can be additive. Empty stomach, treat symptomatically; cautiously give respiratory assistance, CNS stimulants, pressor agents as needed. Carisoprodol is metabolized in the liver and excreted by the kidney. Diuresis and dialysis have been used successfully with related drug meprobamate. Carefully monitor urinary output; avoid overhydration; observe for possible relapse due to incomplete gastric emptying and delayed absorption.

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Rev. 5/72

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Slow ventricular tachycardia documented by His's bundle

Liberato A. Iannone, MD; Richard J. McCarty, MD

A 32-year-old white woman had symptomatic slow ventricular tachycardia which was documented by His's bundle electrograms. In view of her dire symptoms, therapy was instituted initially with oral atropine, which was unsuccessful. Subsequent suppressive therapy with procaine amide successfully abolished her arrhythmia and symptoms.

Slow ventricular tachycardia is generally considered to be a benign arrhythmia and has been noted in patients with acute myocardial infarction,[1] congenital heart block, primary myocardial disease, atherosclerotic cardiovascular disease, digitalis therapy, and in patients with no detectable heart disease.[2] Ventricular tachycardia, regardless of the rate, is one of the most difficult electrocardiographic diagnoses and probably the most important clinical arrhythmia. Reported herein is the case of a symptomatic young woman with slow ventricular tachycardia, without evidence of heart disease, studied with His's bundle electrograms.

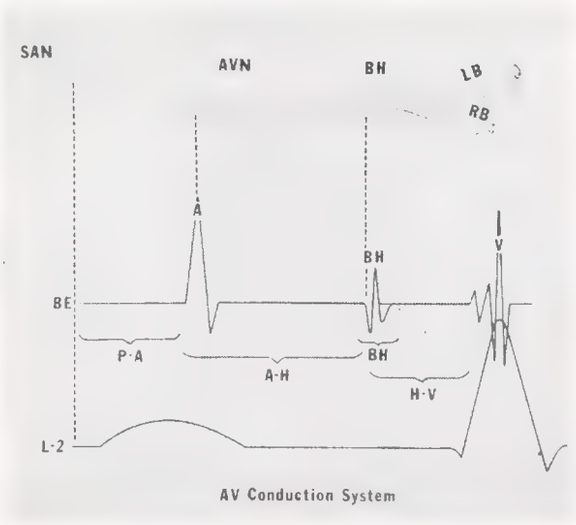
Case Report

A 32-year-old white woman was admitted to the Gynecology Service for menometrorrhagia of uncertain etiology. Approximately one year prior to this admission, ventricular tachycardia associated with dizziness and frank blackout spells had been diagnosed. She had been aware of these tachycardias for the past ten years. She had been experiencing such attacks daily, not infrequently losing consciousness, falling, and injuring herself. There was no other history of cardiac disease or significant medical illness. The results of physical examination, which included the cardiovascular system, resting ECG, and roentgenograms of the chest, were entirely within normal limits. The symptoms manifested by the patient were primarily related to this arrhythmia while she was active. At rest she had no syncope, and Holter monitor strips with slow ventricular tachycardia for up to three minutes were not associated with syncope unless the patient was up and about. Antiarrhythmic treatment with Pro-Banthine up to 30 mg three times a day was unsuccessful. Procaine amide, 250 mg four times a day, abolished the arrhythmia and her symptoms ceased. She has been seen regularly for more than one year, and has had complete relief of her symptoms.

Explanation of Terms

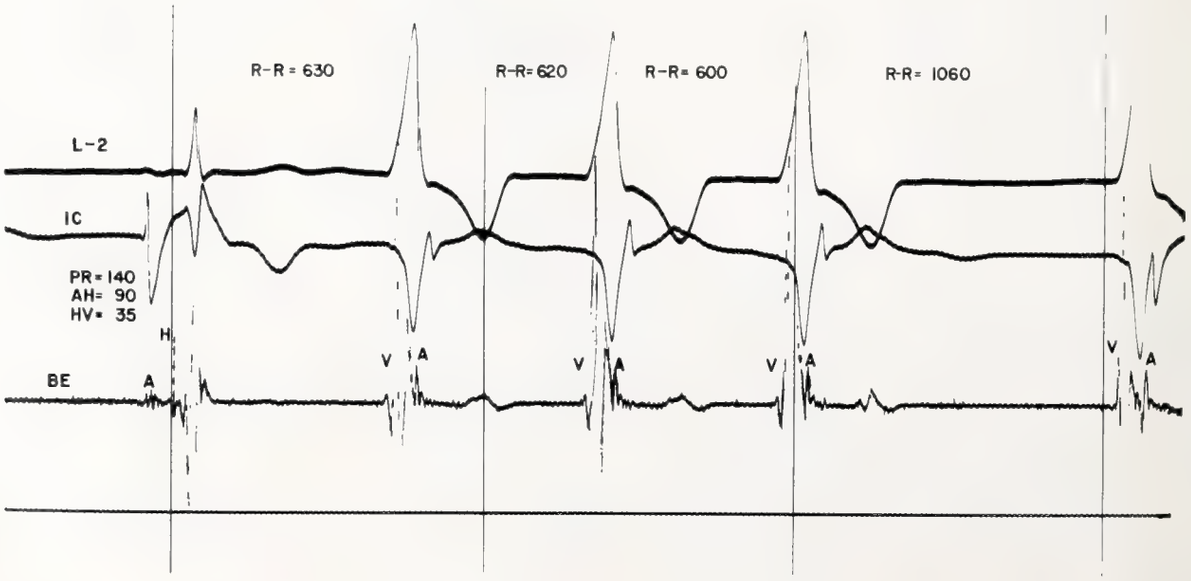
His's bundle conduction intervals (Fig 1):

1. PA is the interval from onset of the P wave to the first rapid deflection of the



1. Diagrammatic representation of sinus node, intra-atrial tracts, AV node, His's bundle, and Purkinje's fibers, with electrocardiogram and His's bundle tracing.

2. Following the first normally conducted sinus beat is a fusion beat with abnormal QRS configuration, but similar to the normally conducted beat. The AH interval is normal but the His's bundle deflection is almost buried in the QRS and antegrade conduction did not occur. This is followed by a normal beat and then an ectopic beat with a nonconducted P wave before the QRS, and the His's bundle deflection is buried in the QRS.



atrial electrogram. This indicates intra-atrial conduction time.

2. AH is the interval from the first rapid deflection of the atrial electrogram to the first high-frequency component of H. This indicates AV nodal conduction time.

3. HV is the interval between the first high-frequency component of H to the earliest initial deflection of the QRS on the surface electrocardiogram. This indicates His's Purkinje's fiber and bundle branch conduction.

Discussion of Tracings

During the His's bundle study the patient's heart beat was paced at rates of 90-150/minute with abolition of the slow ventricular tachycardia and no evidence of Wenckebach phenomenon. She never maintained the abnormal rhythm for more than five to eight beats during the study (Fig 2). Intravenous administration of atropine also abolished her slow ventricular tachycardia. With Tensilon infusion slowing her basic sinus rhythm, she manifested the coupled extra systoles, as noted in Fig 3, as the pacemaker parasystolic focus assumed control of the ventricles. In Fig 3 the sinus beat was associated with normal PR, AH, and HV intervals. The run of slow ventricular tachycardia has variable R to R intervals with a prolonged pause noted after the third ectopic beat and with continuous suppression of the sinus pacemaker. All the P waves noted in the intracavitary lead, following the QRS, are at constant R-P intervals suggesting retrograde VA conduction. Following the sixth beat of the cycle, when a premature ventricular beat occurs, with a much shorter R to R cycle length of 340 msec appearing on the descending limb of the previous T wave, definite retrograde conduction to the atrium is noted. Retrograde activation of the His's bundle is also noted with the His's deflection clearly following the QRS. In this premature systole, the preceding retrograde conduction to His deflection is buried in the QRS and probably caused these areas to be relatively refractory to the next retrograde impulse with prolongation of the V-H interval

3a, b. Continuous strips of the His's bundle recordings show slow ventricular tachycardia starting with a sinus beat with normal conduction followed by an episode of slow ventricular tachycardia (see text).

so that the His's bundle is now visible with a HA time of 90 msec.

Discussion

Massumi[2] noted retrograde penetration of the atrium as seen on these His's bundle electrograms, but no antegrade conduction followed. The retrograde VA conduction noted might seem to place this arrhythmia in the category of (synchronized) AV dissociation,[3] but the absence of the His's bundle deflection before the wide QRS complex eliminates this possibility, since isorhythmic AV dissociation occurs when the rhythm alternates between an atrial and an AV junctional rhythm and the dominant pacemaker slows or the latent pacemaker accelerates. The antegrade AH conduction and retrograde HA conduction are of equal duration, which tends to eliminate accelerated AV conduction as the diagnosis.

Another possibility is that the premature ventricular beat originates from a different focus allowing slower retrograde conduction into the His's bundle, but the QRS complex does not appear to be different. The last beat is not followed by a P wave because of the normal sinus discharge early in ventricular systole. The P is partially buried in the QRS and no retrograde activation could occur. Junctional or nodal rhythm with aberrancy, but without retrograde conduction, is ruled out because of the absence of a His's bundle complex before the QRS. The emergence of the ectopic rhythm was induced with Tensilon, which caused slowing of the dominant rhythm and allowed the parasystolic focus to gain capture of the ventricles; however, this does not explain why the patient spontaneously went into slow ventricular tachycardia during normal sinus rates.

Slow ventricular tachycardia is thought to be a benign condition caused by a parasystolic AV dissociation with an idioventricular focus, and is identical to the arrhythmia that can be produced by electrical stimulation of the ventricle at an isorhythmic rate. Scherf and Chick produced a parasystolic rhythm in dogs by the topical application of 0.5% solution of Veratrine on the exposed ventricular surface of a dog's heart.[4] Rothfield et al[5] studied 100 patients with myocardial infarction; 36 manifested one or more episodes of slow ventricular tachycardia with no deleterious effects. Likewise, Massumi and Ali[1] studied 30 patients with slow ventricular tachycardia associated with a variety of diseases, as well as normal subjects, and found that only one patient required treatment and that the arrhythmia was self-limiting. Slow ventricular tachycardia rarely leads to ventricular fibrillation, spontaneous termination is the rule, and therefore, it is felt that suppressive therapy is not needed. Suppressive drugs may be contraindicated because they slow phase IV depolarization of normal conducting and pacemaker fibers, and can be detrimental by decreasing ventricular rate.[6] Some authors suggest that ventricular tachycardia is a protection against sustained bradycardia.[7]

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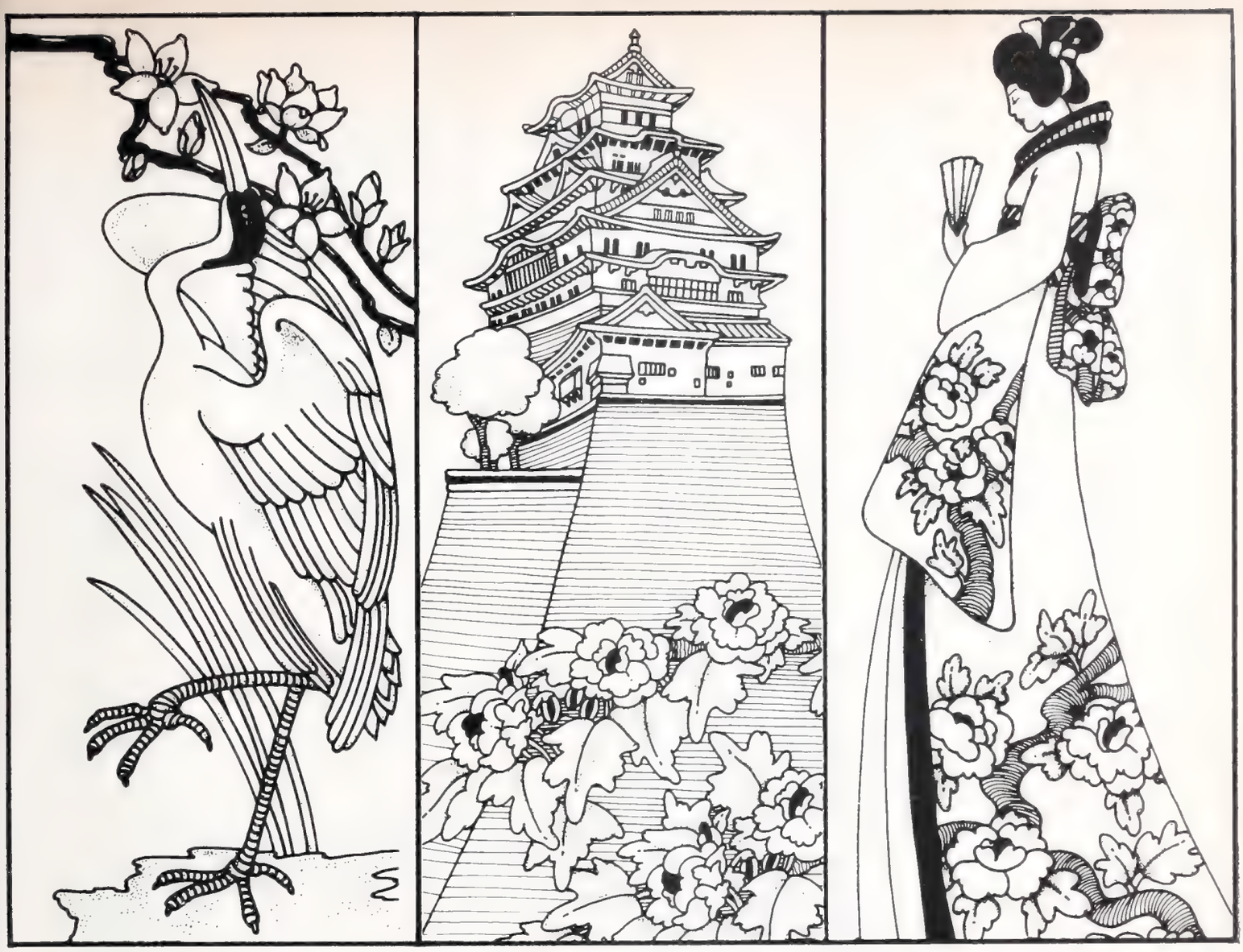

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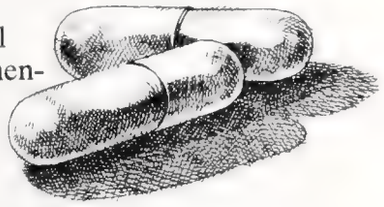

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Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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Regional flaps in head and neck surgery

Robert M. Komorn, MD

Modern surgery is based on the concept of eradicating disease in a manner that is functionally correct, rapid, without significant morbidity, and cosmetically acceptable to the patient. Because of the compact anatomy and the fact that the final result is not hidden by clothing, these requirements pose many challenging problems in the head and neck area. Besides the need for matching color and texture in wound closure or wound resurfacing, the problems of oropharyngeal competence, control of salivary fistulas, protection of vital structures, and augmentation of tissue defects must be solved. Adjacent tissue, even if undamaged by the original trauma, previous irradiation, or the ablative surgery may be unavailable since its use for large defects may produce significant secondary deformities. Repair of form and function must, therefore, be accomplished with free grafts, distal pedicle flaps, or regional flaps. Free grafts lack bulk, don't withstand infection or salivary contamination, and are generally limited to small immobile defects where color and texture matching is not important. Except in rare circumstances distal pedicle flaps have no place in modern head and neck surgery because of the excessive delay and increased morbidity associated with the multiple procedures required for their transfer to the recipient site.

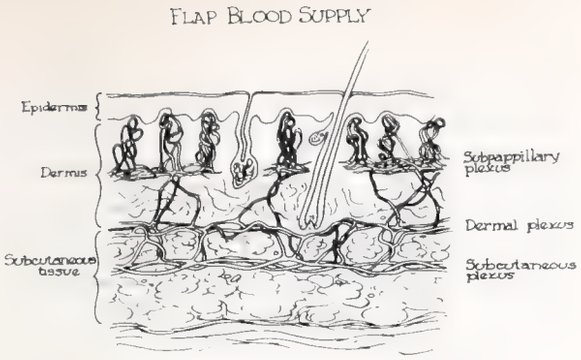
Advantages of Regional Flaps

Regional flaps offer many advantages. By definition they are composed of skin and subcutaneous tissue that is nourished by an independent vascular supply. If their vascular supply is from a named artery they are pedicle flaps, and if it is unnamed they are advancement, transposition, or rotation flaps. Because they have this independent blood supply which is outside the field of previous irradiation, trauma, or surgery, dependence on the recipient site for flap survival is minimal. Properly planned regional flaps provide an abundance of tissue that match color and texture. Shrinkage is minimal. They are close enough to be transferred in one stage and rarely require time consuming delaying procedures.

Flap Survival

As Gillis has stated, "A graft is a dead piece of skin when you put it on and it comes to life later, and a flap is a partly attached piece of skin which is alive when you put it on and it may die later."[1] Whether a flap lives or dies depends primarily on an adequate circulatory capacity for the metabolic needs of the flap. Circulatory capacity is a balance between arterial supply and venous runoff. The arterial supply to a flap is via subcutaneous vessels that feed both superficial and deep plexuses (Fig 1). This arterial supply can be increased by including a major musculocutaneous branch along the length of the flap. The venous drainage of a flap is by the veins and lymphatics that accompany the major arterial branches. Because the arterial pressure is so much greater than venous pressure, mechanical errors in design or placement of the flap will obstruct the veins and not the arteries, thus producing flap congestion or flap death. The three mechanical errors that lead to congestion are tension, kinking, and edema. Tension occurs with either poor suture technique or trying to stretch a flap that is too short or too small. Kinking occurs if the flap is folded greater than 90°, if it is too long and sags, or if excessive fibrosis occurred during a delaying procedure. Edema is a normal response in the first 24-48 hours and must be allowed for, or it can lead to kinking and tension. After 48 hours the persistence of edema is usually due to sepsis. Rarely does one of these mechanical problems occur alone.

If the flap is planned with an adequate circulatory capacity the majority of re-



1. Blood supply to flaps from subcutaneous vessels feeding a deep and superficial plexus.

gional head and neck flaps do not have to be delayed even if a greater than 2:1 length-to-width ratio is used. Flaps are delayed for general metabolic and vascular factors, to insure viability, and for special uses. Severe arteriosclerosis, diabetes mellitus, recent weight loss of greater than 10-15% with negative nitrogen balance, or poor tissue turgor are indications for delay. Age is a relative indication since we have used flaps in 80-90-year-olds without delaying techniques, although we do not exceed a 2:1 length-to-width ratio in this age group. We will also delay a flap if there is a question of its viability when it is first elevated or if special demands are made on the flap.

Clinical judgment is the most useful guide for evaluating flap viability. A viable flap has the same color and is within 5° C temperature at the tip and base. Brisk bleeding and blanching with rapid refill should occur at the tip within two or three minutes after it is raised. Absence of bleeding or blanching later may be due to vessel spasm and is of less significance. Clamping the tip before dividing it or measuring circulation time in the flap has not proven to be practical or useful.

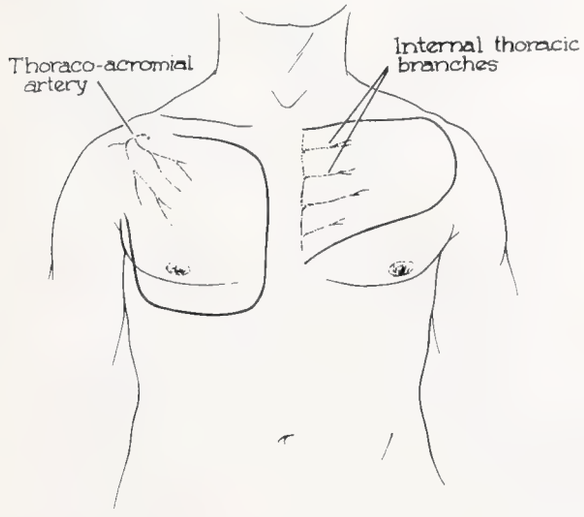
Flaps are also delayed if they are skin grafted to provide a double epithelial lining, if they are compound flaps with cartilage or bone incorporated into the tip of the flap, or if an unusual length-to-width ratio is required. The basic principle of delaying a flap is to interrupt all of its blood supply except at the base. This essentially trains the blood supply at the base to grow along the length of the flap, thus augmenting the existing axial arterial and venous supply of most head and neck flaps.

Specific Flaps

Medial Based (Bakanjian) Chest Flap

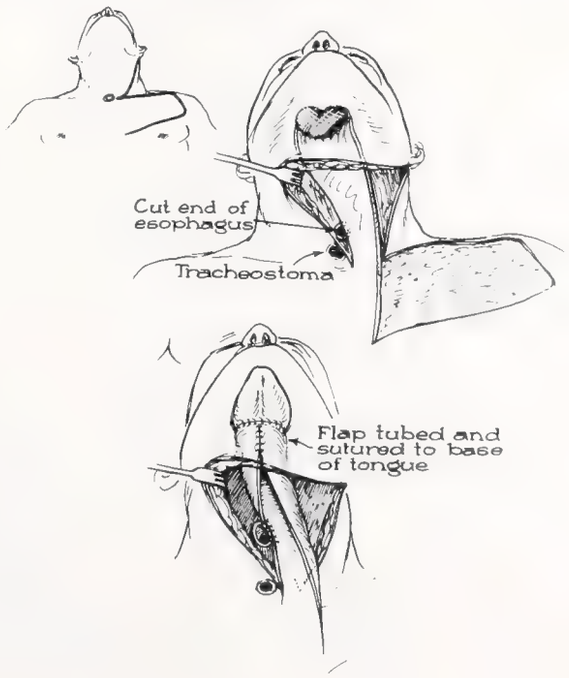
The medial based chest flap is the workhorse of major cervical reconstructive procedures. It is used for pharyngoesophageal reconstruction, carotid artery protection, and cervical skin resurfacing or replacement. It can also be used to reconstruct the anterior floor of the mouth. Prior to the

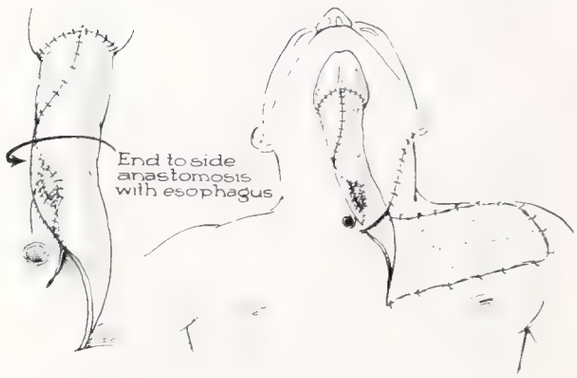
2. Blood supply from the thoraco-acromial artery for lateral chest flaps (left) and from perforating branches of the internal thoracic artery for medial chest flaps (right).



CHEST FLAPS

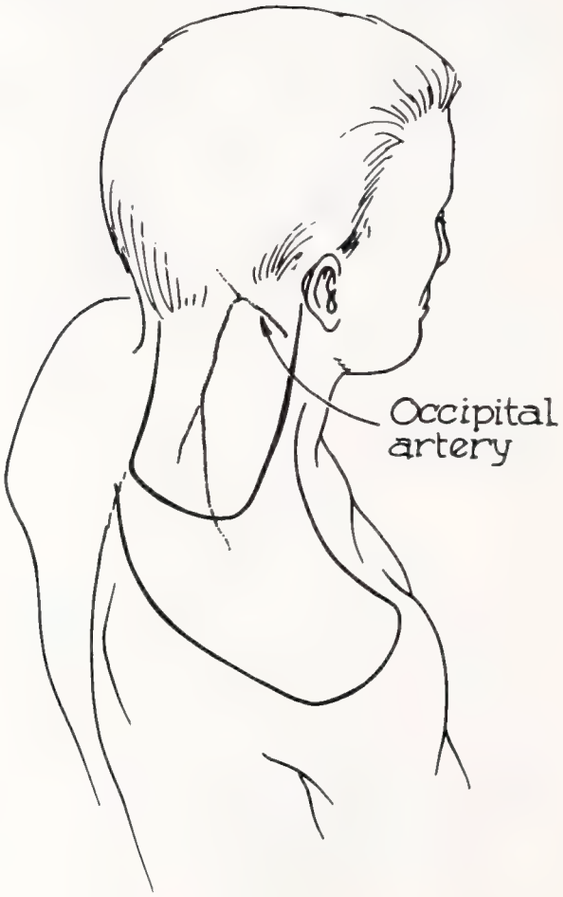
3. Medial chest flap raised and sutured to the base of tongue before tubing.





4. Esophagus anastomosed to the flap in an end-to-side manner. Control fistula and skin graft to donor site on the chest wall.

5. Occipital artery supplying the major arterial blood flow to nape of neck and shoulder flaps.



NAPE-OF-NECK AND SHOULDER FLAPS

use of this flap, massive laryngopharyngectomy resections were judged impossible or resulted in large pharyngostoma that were nearly impossible to reconstruct without multiple staging, recourse to colon bypasses, or the use of distal pedicle flaps. Now reconstruction is done simultaneously with the resection, even in irradiated necks, or as one major procedure after resection. A smaller second procedure is necessary for closure of the control fistula.

The flap has the general outline of rectangle bounded above by the clavicle, laterally by the shoulder and anterior axillary line, inferiorly by the nipple, and medially by the sternum. It receives its primary blood supply from perforating branches of the internal thoracic artery. These vessels are located in the subcutaneous tissue plane above the pectoralis fascia (Fig 2).

Because the blood supply is from the subclavian system it is rarely damaged by radiation or the planned surgical resection. Approximately 22-25 cm of flap with a base of 9-11 cm can be raised without planned delaying techniques. Delaying techniques are used if the flap extends down into the axilla or over the tip of the shoulder. We like to outline and raise the flaps 14-18 days before transfer, if delay is deemed necessary. On several occasions we have used delaying techniques to line this flap with split thickness skin.

The flap is raised at the completion of the ablative surgery. Templates or measurements with silk suture and ruler are used to outline the amount of tissue needed, and this area is marked with methylene blue. If possible, the lower end of the incision used for the ablative surgery is used for the upper edge of the chest flap. The hockey stick, McFee, or apron flap incisions all meet this requirement. When used for total pharyngoesophageal reconstruction the base is placed on the same side as the esophageal stump (Fig 3). The incisions used to raise this flap are made down to and through the superficial pectoralis fascia. This fascia is included in the flap, and dissection never proceeds closer than 2 cm from the sternal border to avoid damaging the perforating vessels. The flap is quickly raised and examined for color,

temperature, blanching, and bleeding at the tip. If it is judged viable it is then laid into the pharyngeal defect. At the upper end the flap is anastomosed to the posterior pharynx and base of tongue in an end-to-end fashion. The deep closure is accomplished with 3-0 interrupted silk and the mucosa to skin closure is with 3-0 chromic. The flap is then tubed with the epithelium on the inside. The esophagus is connected to the flap with an end-to-side anastomosis (Fig 4). The base of the flap is not closed but left as a control fistula. It is important to make sure the fistula is below and separate from the trachea stoma. The defect on the chest wall is covered with split thickness skin grafts. The chest wall defect can frequently be made smaller by using local advancement flaps and retention sutures, but care must be taken that these maneuvers do not compromise the blood supply at the base of the flap. Two to three weeks later when the anastomosis has healed and the control fistula is closed, the base of the flap is returned to the chest wall.

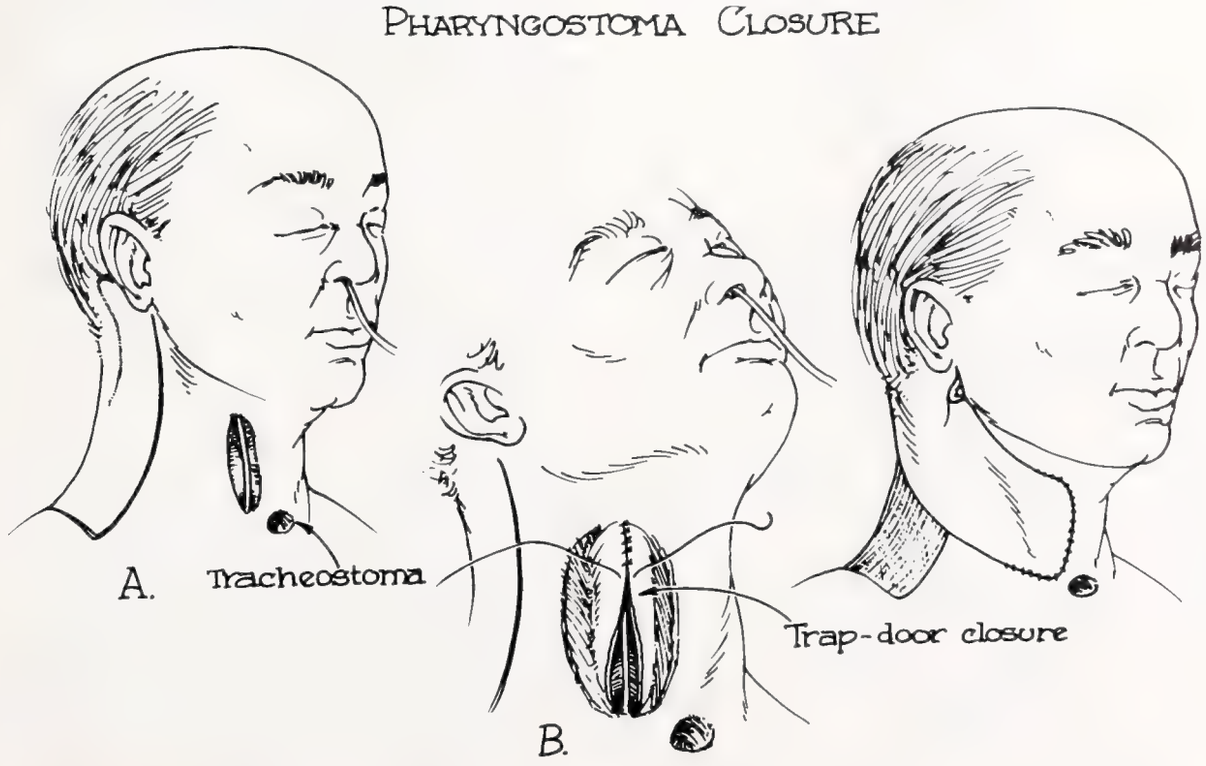
The advantages of the medial based flap are its strength, length, and ease of transfer. Length-to-width ratios of 2½ or 3 to 1 can be obtained without need for delaying techniques. The flap can reach to the level of the eustachian tube orifices internally or the lower cheek externally. Its base is dependent and therefore the design aids venous drainage. Because it is generally used for large defects, it has multiple points of fixation and sagging is generally not a problem. The donor site defect is on the chest and easily hidden by clothing.

Laterally Based Chest Flaps

The laterally based chest flap is more useful for resurfacing and pharyngostoma problems than for total pharyngoesophageal reconstruction. It does not lend itself well to tubing but does provide a large amount of tissue and bulk. It has the general shape of a rectangle and is oriented in a vertical direction. It is based superiorly over the lateral chest and shoulder. The blood supply is primarily from the thoracoacromial and axillary vessels (Fig 2). This flap provides approximately 22 by 11 cm of tissue, and its borders are the clavicle above, the axillary fold laterally, and the sternum medially. It usually extends below and includes the nipple at its inferior extent.

The flap can either be used at the time

6. Technique of closing pharyngostoma with the trap door technique and then covering the closure with a nape of neck flap.



of surgery or delayed 14-18 days before its planned use. After the flap is marked, it is raised with the superficial pectoral fascia. The placement of the cervical incisions used for the ablative surgery are less important than with the medial based flap. When this flap is used for skin resurfacing or pharyngostoma closure, it must be tubed unless all the intervening skin is removed. Dependent tubed flaps may sag, kink, or separate because of gravity. Closure of the pharyngostoma is usually accomplished with a trap door technique. The donor site is handled the same way as with the medial based flap. A nipplectomy is always required as a late procedure.[2]

Nape of Neck and Shoulder Flaps

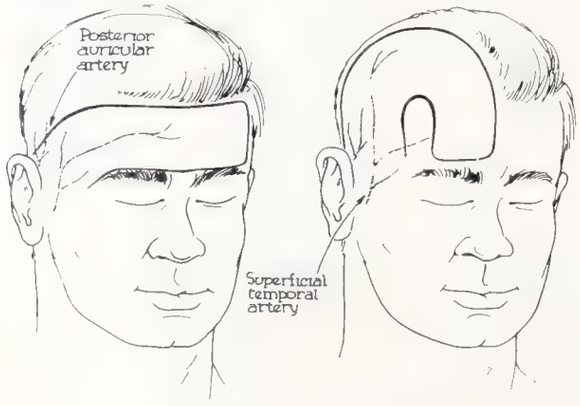
Both the nape of neck and shoulder flap are variations on a theme. They are used primarily for resurfacing and fistula problems in the upper neck, cheek, and parotid areas. The blood supply is from the occipital and postauricular arteries (Fig 5). Even though these arteries are not in the usual radiation fields, sacrificing the external carotid artery during surgery or extensive cervical radiation may compromise the vascularity of these flaps.

If the blood supply is intact these flaps generally can be raised without delay. They provide 20-22 cm of tissue. If it is oriented in a vertical fashion it is a nape of neck flap, and if it extends horizontally it is a shoulder flap. By extending the posterior inferior part of the incision across the midline, additional blood supply can be obtained from the contralateral occipital vessels.

It is an awkward flap to raise. The patient must be in a supine position so that the posterior neck and shoulder can be prepped adequately, draped and exposed. A neurosurgical tripod head holder helps, but the surgeon is still faced with having to work on two sides of the patient. In spite of this disadvantage, the flap is taken from an area that is below the collar line and easily camouflaged by hair or clothing. The flap is also frequently used in its entirety, and therefore, tubing or lining the undersurface with split thickness skin is unnecessary.

The anterior incision used for this flap begins at the mastoid and extends along the anterior border of the trapezius. The inferior excision parallels the spine of the scapula. Superficial fascia must be taken with the flap. The flap is rotated in place after removing all intervening skin, and is sutured in place without tension. The dog ear always presents superiorly, and is ignored since it will either become imperceptible or can be removed in six to eight months. This dog ear contains a major portion of the blood supply to the flap. Occasionally the donor site can be closed primarily or made quite small by use of a local advancement flap. Any residual defect is grafted with split thickness skin. Except for the occasional need to revise the dog ear, there is no late management of this flap and it never has to be divided from its blood supply if intervening skin is removed. It is an excellent flap for resurfacing the lateral neck or providing coverage of an oro- or hypopharyngostoma that is closed by the trap door technique (Fig 6).

7. Superficial temporal and post-auricular arteries can be utilized for forehead (left) and sickle flaps (right).



Forehead Flap

The management of defects of the anterior floor of the mouth can be the most trying in reconstructive surgery.The problems are restoring oral competence to prevent drooling, covering the floor of the mouth and mandible, and supporting the mylohyoid complex. Even though many

techniques are available, including use of chest flaps, sp'it thickness or dermal grafts and local tongue or cheek flaps, we prefer the forehead flap for major floor of the mouth reconstruction. This flap has many unique advantages but also several important disadvantages.

It is based on the superficial temporal and post-auricular arteries (Fig 7). It cannot be used if the external carotid artery is sacrificed or intra-arterial infusion was used previously. The arterial supply also may be endangered by radiation fields that include high retropharyngeal nodes. If the arterial supply is undamaged, it can always provide enough tissue for anterior floor of mouth reconstruction without delaying techniques. A 3- or 4-to-1 length-to-width ratio is the rule. If delaying techniques are used the flap only has to be outlined and not raised because there are no perforating vessels supplying the forehead.

The flap is outlined with methylene blue so that the inferior incision parallels the eyebrow line and the superior incision parallels the hairline. The base is left wide to include the post-auricular vessels. It is a horizontal flap that rarely has to extend beyond the contralateral eyebrow to reach the floor of the mouth. A common mistake is to make this flap too long and then have difficulty with excessive tissue in the oral cavity. The flap is raised by including frontalis muscle but leaving periosteum. Our best results are obtained when we insert the flap through a stab incision of the temporalis muscle and buccal mucosa after tunnelling under the zygoma. If the tunnel is properly prepared there is adequate room, particularly anteriorly medially, where the zygoma joins the maxilla. If the tunnel feels too snug we outfracture the zygoma with chisels.

The flap must be bent upon itself and there is always a temporary fistula that is closed when the flap is divided. The fistula is superior and requires only minimal attention (Fig 8). The cosmetic defect may be significant. Methods to minimize this defect include beveling the skin edges when the flap is cut and returning only enough of the base so that the forehead defect is symmetrical.

We have used this flap for simple floor of mouth resurfacing, as a covering for marginal mandibular resection, and in mandibular reconstruction with autogenous bone or prosthetic devices. Its great bulk is a two-edged sword. On occasion we have had to defat and debulk the flap to prevent trapping of food, but on two occasions when the mandibular reconstruction failed, the forehead flap provided enough projection that oral and mylohyoid competence was maintained.

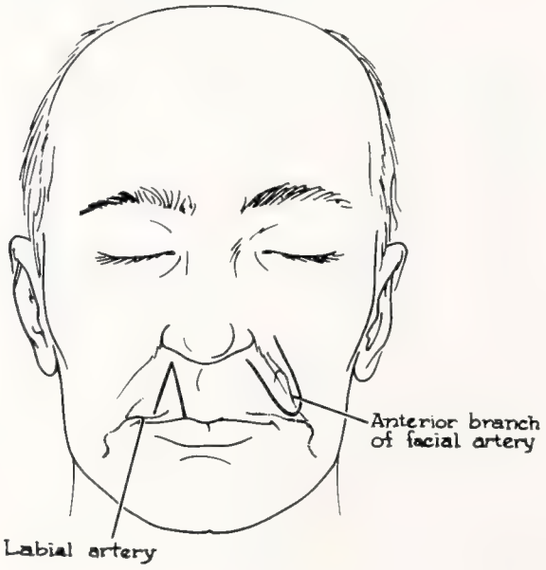
Sickle Flap

The preceding flaps, even though used to restore form and function, were primary examples of function taking precedent over form. Reconstruction about the nose and lips must place equal if not greater weight on form because of the major contributions these two areas contribute to the aesthetic value of the face. Large defects of the nose have been the subject of reconstructive

8. Stages of reconstruction of the anterior floor of the mouth with a forehead flap. (A) Flap outlined. (B) Flap passed under the zygoma into the mouth. (C) Oral floor reconstructed. (D) Final appearance.

9. Sickle scalp flap used to reconstruct the nasal tip. Major portion of flap is a carrier for the blood supply to the donor tissue from the forehead and can be returned after the nasal tip is reconstituted.

10. Blood supply to midface flaps. Labial artery (left) for lip flaps and anterior branch of the facial artery for nasolabial flaps.

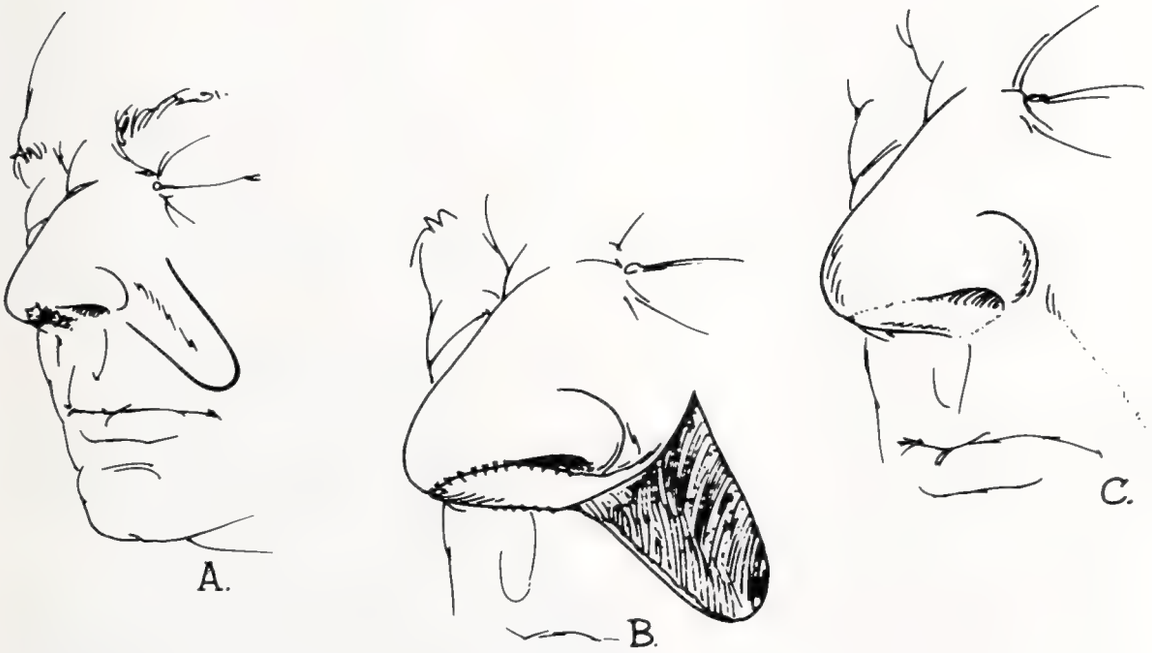


efforts for centuries. The sickle flap or some variation of it is presently the most useful technique for major nasal tip reconstruction. Like the forehead flap, it is based on the superficial temporal and post-auricular arteries (Fig 7). It is a gently curved C-shaped flap that provides a small area of non-hair-bearing skin from the forehead. The hair-bearing portion of the flap is the carrier for the vascular supply. Shrinkage is approximately 10-15%. Color and texture match is excellent. It is frequently delayed for the purposes of lining the undersurface with split thickness skin or the incorporation of cartilage. A template of the defect is used to mark out the distal end of the flap. If the undersurface must be lined the first stage is to outline the flap without raising it except for the tip. Split thickness skin is placed under the tip and the whole flap resutured for 14-18 days. At the end of that time, the flap is transferred to the tip of the nose and sutured into place (Fig 9). The donor site is dressed with Telfa until the carrier portion of the flap is divided and returned to the scalp two to three weeks later. At this time the forehead defect is covered with a skin graft if this was not done when the flap was initially transferred. Defatting and resculpturing of the new nasal tip always must be done and this cosmetic polishing generally begins four to six months after the flap is divided.

Nasolabial Flap

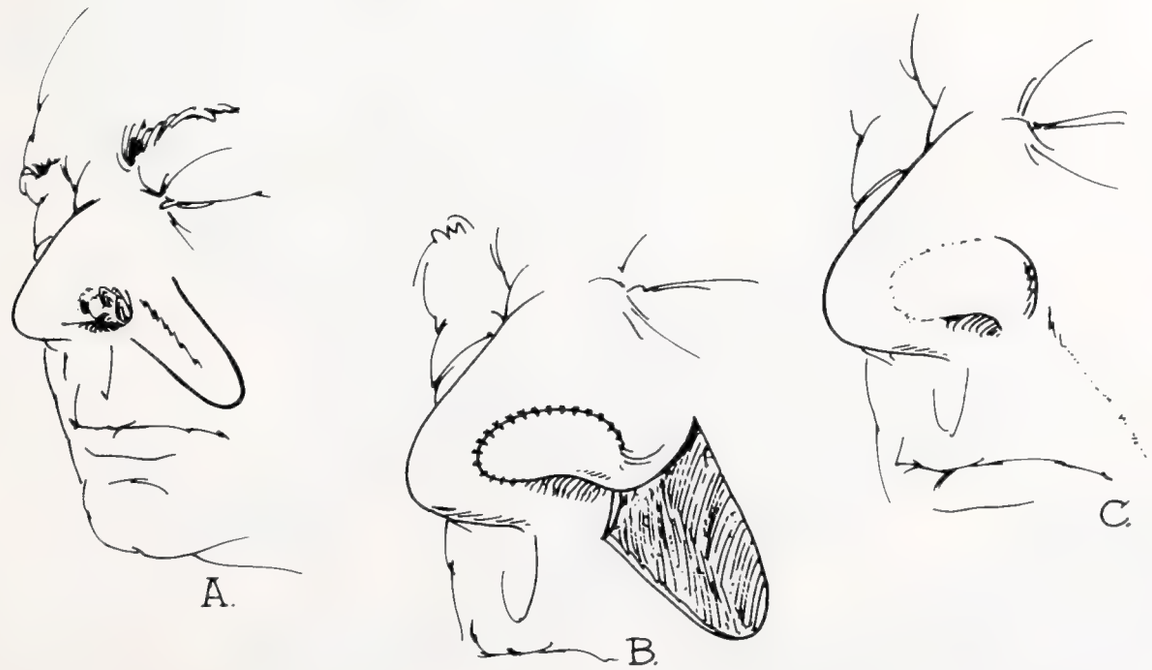
Smaller defects of the nasal ala or columella can be repaired with the rectangular nasolabial flap. Its base is at the nasofacial groove and it runs obliquely along the course of the angular vessels (Fig 10). Approximately 1½ by 4 cm of tissue are available without delaying procedures. It easily reaches the columella or lateral ala rim but it cannot reach the nasal tip.

This flap almost always has to be lined or folded upon itself because of the two-sided epithelial lining needed to reconstruct the columella (Fig 11). After the defect is delineated the flap is outlined and raised by including the superficial facial fascia. Any necessary skin grafting of the undersurface of the flap is done at this



11. Nasolabial flap used to reconstruct a columella defect.

12. Nasolabial flap used to reconstruct an alar defect.



time. Delaying the flap for skin grafting is rarely necessary.

Of all the flaps discussed this one appears to be the most precarious in the immediate postoperative period. In order to reach an alar defect, the flap undergoes an unusual amount of rotation and twisting (Fig 12). The donor site defect is imperceptible, however, because it lies in the natural nasolabial groove. The base and carrier portion of the flap must be divided two to four weeks after transfer and it is usually discarded. Final trimming of the flap or providing additional support with cartilage or alloplastic implants can be accomplished at a later time if indicated.

Abby Flap

Lip reconstruction can be accomplished with advancement flaps or pedicle flaps. The excessive mobility of the lips allows advancement flaps for defects as large as one-fourth or one-third of the lip to be cosmetically practical. We prefer to use advanced flaps rather than wedge shaped excision if the defect is 25% or less. If half of the lip needs to be reconstructed, a pedicle flap from the opposite lip produces a more symmetrical result. The Abby flap, a full-thickness flap containing vermillion border, skin, muscle, and mucosa, is the most useful of the lip pedicle flaps (Fig 10). It is transferred with only the labial artery as a pedicle and in this respect, resembles an island flap. It is precisely measured to match the exact vertical size of the defect, but only one-half of the horizontal defect. It is rotated 180°; this is the only flap that can withstand that amount of rotation. It must be closed in three or four layers since failure to reconstruct the obicularis oris muscle not only results in a wide scar but also oral incompetence (Fig 13). It can be divided as early as 14 days after placement and it has been successful in patients over 80 years of age. During the two- to three-week period before it is divided, the patient is fed a liquid diet and encouraged not to make excessive chewing movements. At the time the flap is divided, a small Z-plasty or scar revision may be necessary to align the mucosa or vermillion border.

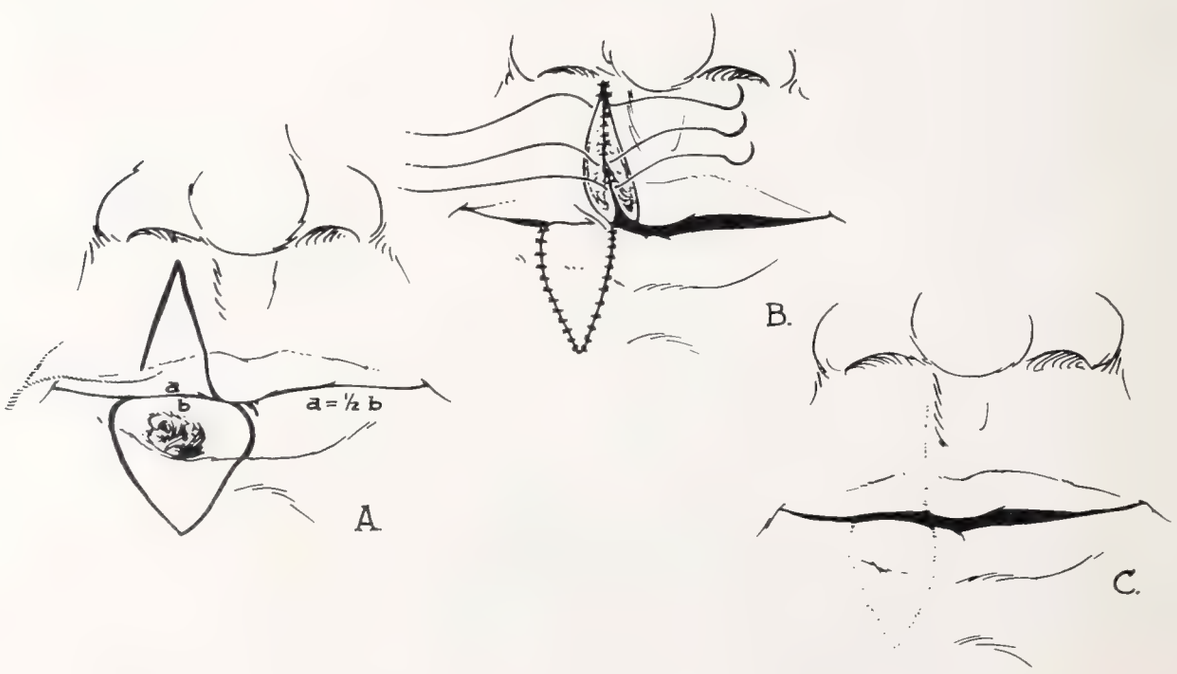
Reference

1. Gilles H, Millard RD: The Principles and Art of Plastic Surgery, vol I. Boston, Little, Brown and Company, p. 113.

Dr. Komorn, 7800 Fannin, Houston, Texas 77054.

13. Use of Abby (labial) flap to reconstruct skin and vermillion border defect. (A) Flap outlined and measured so that it equals one-half the width of the defect. (B) Three-layer closure to reconstruct the muscle. (C) Final result after the flap is divided.

LIP RECONSTRUCTION



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- Individualized therapy—Enarax® 5 (oxyphencyclimine HCl 5 mg./hydroxyzine HCl 25 mg.). Enarax® 10 (oxyphencyclimine HCl 10 mg./hydroxyzine HCl 25 mg.).
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Each Enarax 5 tablet contains:

oxyphencyclimine HCl	5 mg.
hydroxyzine HCl N.F. (Atarax)®	25 mg.

Each Enarax 10 tablet contains:

oxyphencyclimine HCl	10 mg.
hydroxyzine HCl N.F. (Atarax)®	25 mg.

Description. Enarax is a combination of oxyphencyclimine HCl and hydroxyzine HCl. Oxyphencyclimine HCl is a crystalline substance characterized by the chemical formula: (1-methyl-1,4,5,6 tetrahydro-2-pyrimidyl-methyl alpha-cyclohexyl-alpha-phenylglycolate hydrochloride). It is soluble and stable in aqueous solutions.

Hydroxyzine HCl is designated chemically as 1-(p-chlorobenzhydryl)-4-[2-(2-hydroxyethoxy)-ethyl] piperazine dihydrochloride.

Actions. Oxyphencyclimine HCl provides long acting suppression of gastric secretion through its anticholinergic action. The mechanism of this action is the inhibition of acetylcholine at postganglionic cholinergic sites in structures innervated by postganglionic parasympathetic nerves and on smooth muscle not so innervated but responsive to acetylcholine.

Hydroxyzine HCl, marketed under the trade name, Atarax®, has been shown clinically to be an effective anti-anxiety agent. It induces a calming effect in anxious, tense individuals without impairing mental alertness. It is not a cortical depressant, but its action may be due to a suppression of activity in certain key regions of the subcortical area of the central nervous system.

***Indications.** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Possibly Effective: As adjunctive therapy in peptic ulcer; irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, functional gastrointestinal disorders); functional diarrhea; drug induced diarrhea; ulcerative colitis, and urinary bladder spasm and ureteral spasm (i.e. smooth muscle spasm).

Final classification of these less than effective indications requires further investigation.

Contraindications. Because of its anticholinergic activity, Enarax is contraindicated in the presence of glaucoma, obstructive uropathy (i.e. bladder neck obstruction due to prostatic hypertrophy), obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis, etc.); paralytic ileus; intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis.

Warnings. Hydroxyzine, when administered to the pregnant mouse, rat, and rabbit induced fetal abnormalities in the rat at doses substantially above the human therapeutic range. Clinical data in human beings are inadequate to establish safety in early pregnancy. Until such data are available, hydroxyzine-containing drugs are not advised in early pregnancy.

In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heatstroke due to decreased sweating).

Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful.

Enarax may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery, or perform hazardous work while taking this drug.

Precautions. Anticholinergics should be used with caution in patients with:

autonomic neuropathy,

hepatic or renal disease,

ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon.

hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension and nonobstructing prostatic hypertrophy; hiatal hernia associated with reflux esophagitis, since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis).

The use of this drug in the presence of complication of biliary tract disease should not be relied upon.

Tachycardia should be thoroughly investigated before giving anticholinergic (atropine-like) drugs since they may increase the heart rate.

With overdosage, a curare-like action may occur.

Adverse Reactions. As with other anticholinergics, oxyphencyclimine HCl produces certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these.

Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis, dilatation of the pupil; cycloplegia, increased ocular tension; loss of taste; headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestation; some degree of mental confusion and/or excitement especially in elderly persons.

Decreased sweating is another adverse reaction that may occur. It should be noted that adrenergic innervation of the eccrine sweat glands on the palms and soles make complete control of sweating impossible. An end point of complete anhidrosis cannot occur because large doses of drug would be required, and this would produce severe side effects from parasympathetic paralysis.

Side effects which occasionally occur with hydroxyzine HCl (Atarax)® are drowsiness, xerostomia, and, at extremely high doses, involuntary motor activity, all of which may be controlled by reduction of the dosage or discontinuation of the medication.

Dosage and Administration. The recommended adult dose is usually one Enarax 5 or one Enarax 10 tablet two times a day or three times a day, depending on individual response. Proper diet and antacids should be used where indicated as concomitant therapy. The safe use of Enarax in children has not been established; therefore, the drug should not be used in children.

Drug Interactions. The potentiating action of hydroxyzine must be considered when the drug is used in combination with central nervous system depressants.

How Supplied. Enarax 5 is available as white scored tablets in bottles of 60. Enarax 10 is available as black and white scored tablets in bottles of 60.

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A division of Pfizer Pharmaceuticals
New York, New York 10017

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A metabolic and nutritional evaluation of burn neutrophil function

E. Stan Lennard, MD; Harold G. Petering, PhD; J. Wesley Alexander, MD, ScD

A study of 15 thermal burn patients has revealed episodes of invasive sepsis associated with intracellular metabolic defects and opsonophagocytic abnormalities. Depressed nitroblue tetrazolium reduction associated with increased phagocytosis appeared to be correlated with impaired neutrophil killing capacity. Zinc levels of burn and healthy control neutrophils varied cyclically over a time span, suggesting a possible correlation between zinc content and phagocytic activity and a nutritional basis for burn neutrophil dysfunction.

In his "Reminiscences of Forty-Five Years Dealing with Surgical Infections,"[1] Meleney wrote, "In my two books I stated that the goal of the surgical bacteriologist could only be reached when it would be possible to prevent bacteria from establishing themselves within the body, and to stop the activity of bacteria, if they had already gained a foothold in the body. It was felt that with the discovery of the sulfonamides and the antibiotics that goal was in sight."

Approximately 30 years after the publication of these books, Altemeier stated,[2] "After the general use of modern antibiotic therapy for more than a quarter of a century, it has become apparent that the overall incidence of infection in the trauma patient has not been decreased, and that many related problems are still with us." He further said that a 14-fold increase in gram-negative infections was seen between 1956 and 1970 in trauma patients which appeared related to the extensive use of antibiotic therapy. In fact, about 80% of these infections occurred during antibiotic prophylaxis, often in large dosages.

Since the advent of antibiotic therapy, improved surgical techniques have been extended to a progressively higher risk group of patients. Invasive wound infection has continued to be a major problem in the management of these patients, and it has become clear that additional means of manipulating host defense mechanisms are needed to prevent the high mortality so prevalent in hospital wards today.

In the latter 1960s a growing understanding of the pathogenesis of chronic granulomatous disease of childhood threw open a door which may lead eventually to manipulation of phagocytic activity in host defense. Although polymorphonuclear neutrophils from these patients had normal morphology and phagocytic activity, a profound bactericidal defect was found characterized by persistence of viable bacteria within the cytoplasm of the cells. Metabolic studies of these neutrophils revealed a failure of the hexose monophosphate shunt and of stimulation of oxygen utilization with formation of hydrogen peroxide (H_2O_2).[3,4]

Baehner and Nathan[5] presented evidence that the defect associated with impaired intracellular killing in chronic granulomatous disease was due to absent reduced nicotinamide adenine dinucleotide (NADH) oxidase activity, screened cytochemically by means of the nitroblue tetrazolium test. Further clarification of the defect was presented when Baehner et al[6] corrected the deficiency in killing by addition of a H_2O_2-generating system bound to latex particles. They concluded that inadequate production of H_2O_2 secondary to deficient NADH oxidase activity accounted for the killing defect.

Johnston and Baehner[7] developed a scheme for the enzymatic reactions accounting for the oxidative burst and production of H_2O_2 in normal cells (Fig 1). They believed that adenosine triphosphate (ATP) formed from terminal glycolysis was required for bacterial uptake and that

NADH also produced in this pathway was oxidized to form H_2O_2. Interaction of H_2O_2 with glutathione and its reductase enzyme led to the formation of nicotinamide adenine dinucleotide phosphate (NADP), which stimulated the hexose monophosphate shunt. For the first time, biochemical characterization of a neutrophil defect in bacterial killing was possible and suggested that manipulation of one parameter of host defense was indeed a possibility.

Alexander[8] observed that certain surgical illnesses (for example, burns and severe trauma) appeared to induce abnormalities of neutrophil function similar to those described in chronic granulomatous disease. They preceded the onset of clinical sepsis by approximately two days and cycled with a characteristic periodicity of 14-24 days in humans. This cycling phenomenon, though less pronounced, was present in normal controls as well and was apparently free of endocrinologic control.[9,10] These abnormalities seemed to involve phagocytosis and bactericidal capacity, although contributory factors probably included impaired opsonization and induction of the inflammatory lesion. At points of most severely impaired function in this cycle, when Neutrophil Bactericidal Index values exceeded four, positive blood cultures and increased burn eschar colonization were seen, and bacterial division was observed within phagolysosomes, testifying to the viability of organisms after their ingestion by the burn neutrophil. A defective enzymatic bactericidal process was believed to account for this killing defect.[11]

These studies demonstrated a physiologic basis for the increasing problem of opportunistic infections classified by Altemeier and recognized by so many clinicians. Moreover, these and other studies have opened the door for investigations designed to determine methods for the manipulation of neutrophil function to the patient's advantage. Windhorst has proposed "that work of this nature is leading us into a new era of drug therapy, in which manipulation of body defense by alteration of phagocyte function, including neutrophils, will be a realistic clinical goal."[12]

In the succeeding sections of this article, pertinent aspects of polymorphonuclear neutrophil metabolism and bactericidal mechanisms will be discussed to provide a background for the nutritional evaluation of the burn neutrophil that has comprised the heart of recent studies in our laboratory.

1. Summary of bactericidal substances in polymorphonuclear neutrophils based on a literature review.

SUBSTANCES WITH BACTERICIDAL POTENCY IN PMN NEUTROPHILS
Peroxidases /oxidases
Lactoferrin
H_2O_2
Reduced pH / increased lactic acid
Cationic proteins (Phagocytin?)
Myeloperoxidase - H_2O_2 - Halogen (Cl^- or I^-)
Superoxide

Polymorphonuclear Neutrophil Metabolism and Mechanisms of Intracellular Killing

Karnovsky[13] discussed leukocyte metabolism and showed that polymorphonuclear neutrophils depend largely upon glycolysis for their energy, and that phagocytosis stimulates the glycolytic pathway, a reaction that may proceed under both aerobic and anaerobic conditions. Linkage of this activity to the hexose monophosphate shunt is disputed as to sequence and pur-

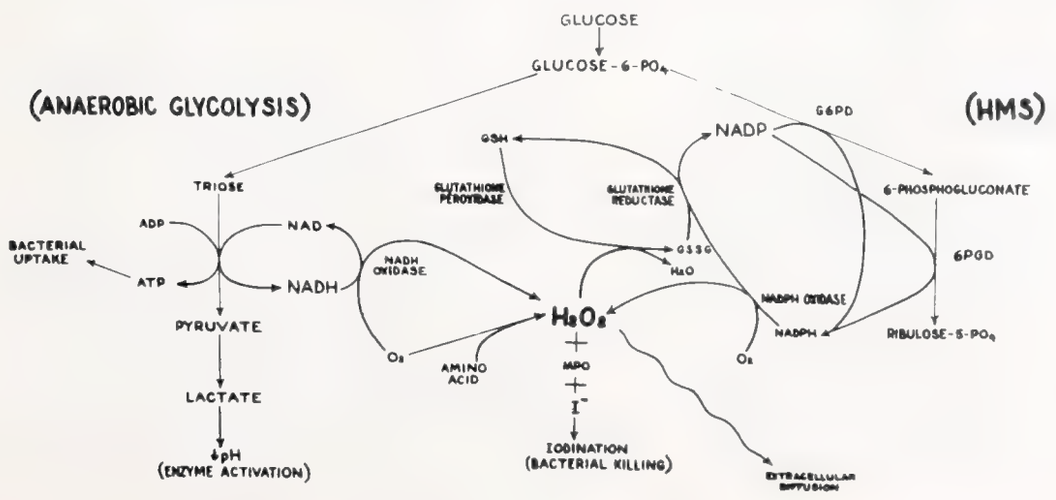
pose and has stimulated questions concerning the enzymatic basis for the increased oxygen uptake that accompanies phagocytosis. However, Baehner et al[14] have presented convincing evidence that shows that NADH oxidase activity is primarily responsible for this increased oxygen utilization, and that hexose monophosphate shunt stimulation is a metabolic sequence secondary to intracellular killing.

The metabolic activity accompanying phagocytosis results in the production of multiple substances with bactericidal potency that bombard ingested micro-organisms within phagolysosomes (Fig 1). Which substances are responsible for killing at any one time is a complex and essentially unresolved issue, and studies of correlations between specific cellular deficiencies and loss of bactericidal capacity are required to clarify this problem. Attention will now be directed to specific components of this system that may relate to burn neutrophil function.

Mandell[15] demonstrated that intraphagosomal pH reaches a range of 6.0-6.5 after phagocytosis, and attributed it to the accumulation of lactic acid from glycolysis. He went on to cite data linking many antibacterial mechanisms to this reduction in intracellular pH. In 1972, Hirsch[16] presented confirmatory data that intraphagosomal killing occurs in an acidic environment with a pH range of 4.7-5.5.

Klebanoff[17] recognized the exceptionally rich peroxidase content of polymorphonuclear neutrophils that alone was not significantly bactericidal. However, if myeloperoxidase was combined with iodide ions and H_2O_2, a bactericidal effect was demonstrable in *E coli* lysosomes involving the oxidation of this halide to iodine. The pH optimum of this reaction was in the acid range and appeared linked to the H_2O_2 production accompanying phagocytosis. The following year Klebanoff[18] extended the reaction to bromide and chloride. McRipley and Sbarra[19] presented evidence to indicate that H_2O_2 formed by oxidation of NADPH by its oxidase was also involved in intracellular killing, although Mandell et al[20] challenged the importance of NADPH

2. A proposed scheme for the enzymatic reactions accounting for the utilization of oxygen and production of hydrogen peroxide involved in intracellular killing.



oxidase activity when they demonstrated that hydrocortisone, a known NADH oxidase inhibitor, blocked the oxygen consumption, H_2O_2 formation, and nitroblue tetrazolium dye reduction seen in neutrophils following phagocytosis.

Another study by Sbarra's group[21] concerned the mechanism of bacterial killing by the myeloperoxidase-H_2O_2-halide system. They found evidence that aldehydes formed by the deamination and decarboxylation of bacterial substrates by these reactants were in fact the bactericidal agents. They also believed that the halide physiologically involved in neutrophil killing was chloride rather than iodide.

A compound of great oxidative-reductive potential in neutrophils has been described as a "superoxide" anion (O_2-) that may be converted to either O_2 or H_2O_2 with the release of large amounts of energy. It has been associated with the single-electron reduction of cytochrome c and has been proposed as a possible agent of bacterial killing.[22]

Although strongly cationic proteins with antibacterial activity have been isolated from various tissues, it was Spitznagel and Chi[23] who described an interaction between bacteria and the granule-associated cationic proteins of neutrophils constituting a lethal event. Their mechanism of action appeared to be interference with bacterial cell membrane permeability and combination with nucleic acids and enzyme systems. Confirmation of the antibacterial nature of cationic proteins was afforded by a study of chicken polymorphonuclear neutrophils which lack myeloperoxidase but retain antibacterial activity.[24]

Masson et al[25] determined that neutrophils contain lactoferrin which exerts bacteriostatic effects through its chelating properties. Its presence appears to enhance the lytic activity of lysozyme to otherwise insensitive bacteria.

Jenkin[26] remarked that opsonins not only enhance phagocytosis but also may play a role in determining the fate of ingested organisms. Pneumococcal virulence has been related to the quantity of specific capsular lipopolysaccharide on the surface of the cells.[27] Similarly, Rowley[28] related the virulence of *Salmonella* to its lipopolysaccharide antigens in a quantitative sense. The more antigen present in the cell wall, the more antibody and complement was required for its degradation to allow remaining immune complexes to react with and disrupt the vulnerable cell membrane. Gewurtz[29] demonstrated holes in a lipopolysaccharide membrane of *Veillonella alcalescens* that were created by the action of serum complement with endotoxin acting as its substrate. By this activity complement appears to modify the virulence of certain organisms by making them more susceptible to mechanisms of intracellular killing.

Stossel et al[30] studied the phagocytosis of paraffin oil-droplets coated with *E coli* 026:B6 lipopolysaccharide and found that opsonization did not require the action of C′2 or C′4. It was, however, dependent on C′3 and the properdin, or alternate, pathway. Unlike the classical complement pathway, this alternate system may be activated by polysaccharide in the absence of antibody.[31] Stossel's findings revealed that lipopolysaccharide, which comprises the endotoxin of gram-negative organisms, appears to depend solely on the properdin system and is independent to a degree from the classical, antibody-mediated pathway. If present, however, antibody could enhance the properdin system.

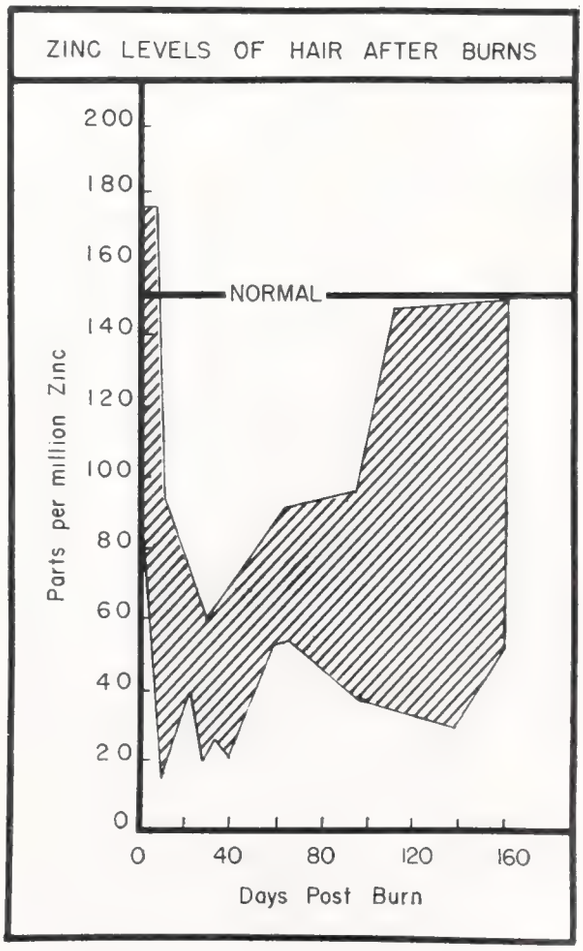
Bjornson[32] demonstrated two immune

mechanisms for the phagocytosis and intracellular killing of *Pseudomonas aeruginosa* by human polymorphonuclear neutrophils. It appeared that the alternate pathway was normally activated when this organism invaded the body. However, immune antibody seemed to negate the need for the alternate pathway in the opsonization of *Pseudomonas*. The significance of the activities of these two immunohumoral mechanisms in host defense against *Pseudomonas* is currently under study by Bjornson and Alexander.

Nutritional Deficiency and Polymorphonuclear Neutrophil Function

A recent study of children with protein-calorie malnutrition by Yoshida and Metcoff[33] showed metabolic changes in neutrophils consistent with impaired terminal glycolysis at the site of pyruvic kinase activity. In an associated publication, Yoshida et al[34] attempted to correlate the increased infection rates seen in these children with this glycolytic defect associated with impaired phagocytic activity. They went further to observe that children with protein-calorie malnutrition have abnormally high intracellular sodium levels in muscle cells due possibly to sodium pump failure, and noted that pyruvic kinase activity is dependent upon an adequate level of potassium ion. The glycolytic defect in this form of malnutrition could conceivably be attributed to sodium pump failure in neutrophils with impaired pyruvate kinase activity. Patients with hemorrhagic shock also have an apparent sodium pump defect in their erythrocytes, and the susceptibility of this type of patient to invasive infection is well known.[35]

Shousha and Kamel[36] studied patients with kwashiorkor and found decreased nitroblue tetrazolium dye reduction even with intercurrent infections that suggested a metabolic defect related to NADH oxidase



3. The area between the extreme values represents hair zinc levels obtained in 47 patients at Brooke Army Hospital with second- and third-degree burns. This figure is reproduced from Pories WJ et al: Trace elements and wound healing. Proc 1st Conf on Trace Substances in Environmental Health, DD Hemphill (Ed), University of Missouri, Columbia, July 10-11, 1967.

activity and an increased susceptibility to infection.

Zinc deficiency is most dramatically manifested by cessation of growth and decrease in appetite, but the exact metabolic defect has yet to be described.[37] In kwashiorkor it is known that serum zinc levels are less than half of normal.[38] This disease is prevalent in parts of the world where plant protein, containing phytate, constitutes the major source of nitrogen, and phytate is known to inhibit zinc absorption in the alimentary canal.[39] A potentially important physiologic role exists for zinc in host defense. Parisi and Vallee[40] list 29 metalloenzymes and metalloproteins that contain zinc, some of which interact with cofactors nicotinamide adenine dinucleotide (NAD) and flavin adenine dinucleotide (FAD). They report that zinc is present in all formed elements of blood, including leukocytes, which contain 3% of whole blood zinc, and that low serum zinc levels have been associated with both acute and chronic infections.

In summary, a number of nutritional deficiency states have been associated with increased infection rates, and enzymatic defects have been identified in many of these patients. Certain trace element deficiencies seem to be integrally associated with a number of these states and deserve further investigative effort to clarify their roles in maintaining normal host defense.

Clinical Considerations of the Burn Neutrophil

Extensive burn injuries are invariably associated with invasive infection, and a predominant cause of death continues to be sepsis. Alexander related the diminished resistance to infection in these patients to impaired neutrophil functional capacity.[41] The physiological derangements accompanying this impaired host resistance need further clarification, but it is known that burn patients acquire a complex set of nutritional deficiencies.

W. J. Pories, in a personal communication, described a profound zinc deficiency in thermal burn patients in a study he conducted at Brooke Army General Hospital in San Antonio, Texas. This deficiency was defined by assay of hair zinc levels and lasted at least 110 days post-burn injury. The graphic representation of these data is presented in Fig 3. Studies in progress at the Cincinnati Shriners Burns Institute also suggest that burn patients acquire significant serum zinc deficiencies relative to a control population, according to E. H. Law in a personal communication, although surprisingly low serum levels have been found in certain apparently healthy controls, creating a difficult problem in the interpretation of the data.

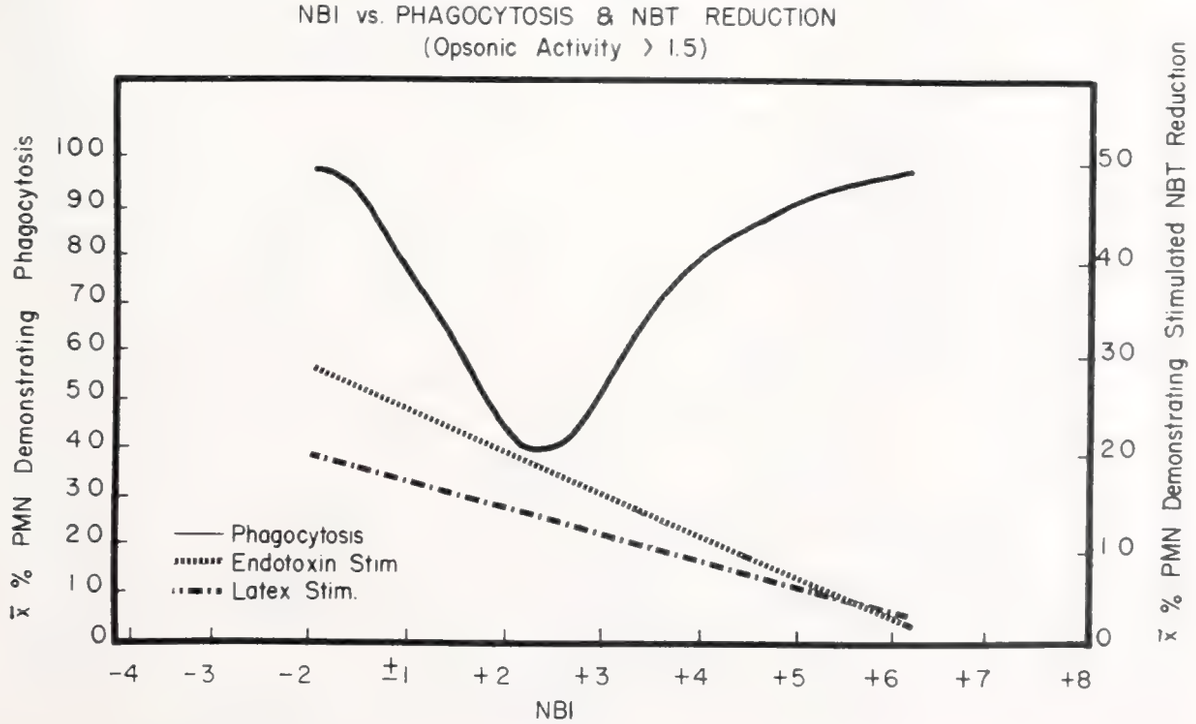
Personal studies of thermal burn patients underway at the Shriners Burns Institute and Cincinnati General Hospital of the University of Cincinnati Medical Center have revealed interesting patterns in several parameters of host defense, particularly polymorphonuclear neutrophil function and neutrophil zinc content. Neutrophil function was evaluated by Alexander's Neutrophil Bactericidal Index,[42] the nitroblue tetrazolium test of Park and associates,[43] and the $^{14}CO_2$ assay of Keusch et al.[44] Serial blood cultures and opsonization activities were also recorded, the latter determinations performed by A. B. Bjornson. Assays for neutrophil zinc content were performed by atomic absorption spectrophotometry by H. G. Petering and his laboratory in the Department of Environmental Health of the University of Cincinnati College of Medicine. To date, 15 patients aged 3-51 years

(mean age 24.9 years) have been studied up to 70 days post-burn. Total body surface burns have ranged from 36-75% with 19-74% being third-degree involvement. Sepsis has developed in six patients, and four have died.

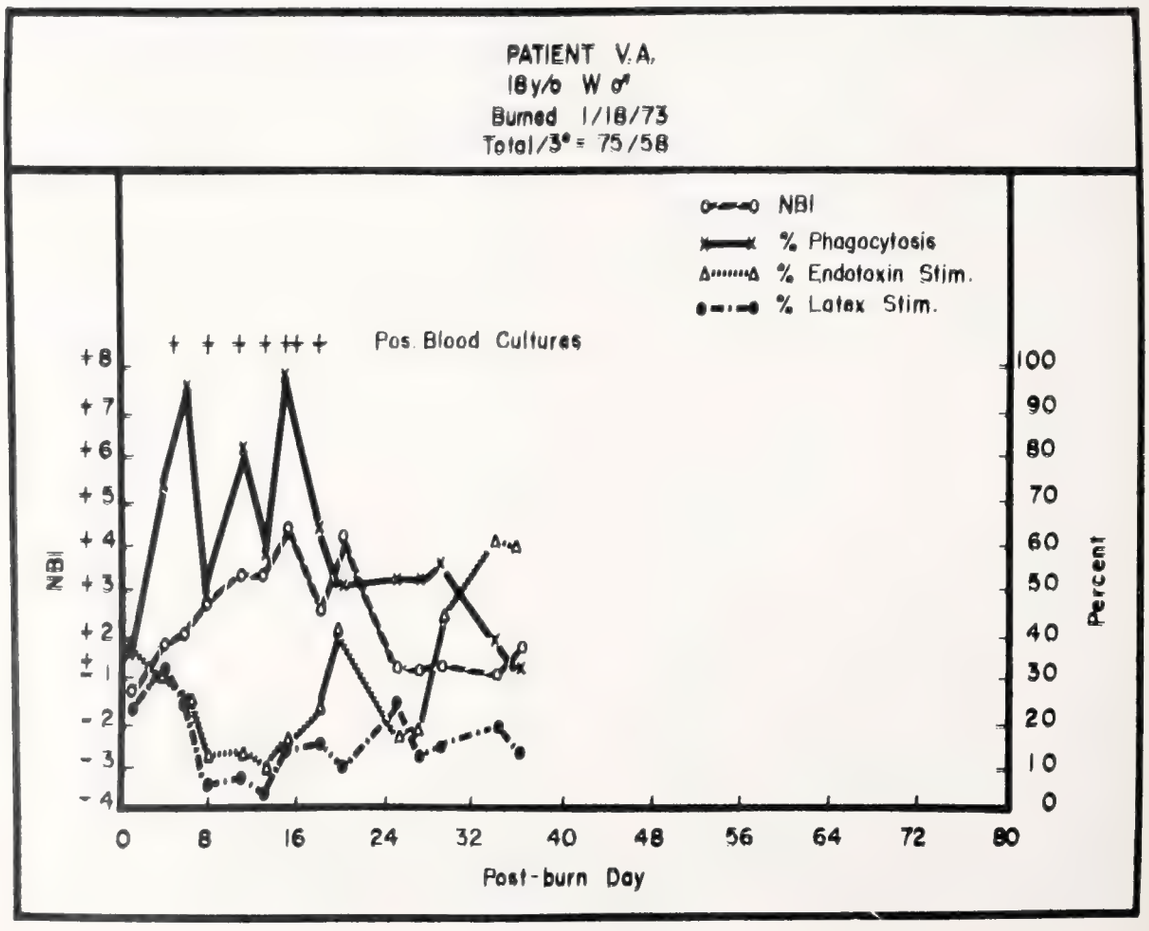
In the immediate postburn period opsonic activity for *E coli* was found deficient, failing to return to normal until 4-25 days post-burn (average 14 days), and involved diminished functional capacity in the alternate complement pathway.[45] Neutrophil Bactericidal Index values less than one were associated with a stimulated nitroblue tetrazolium reduction of 33.8% by latex and 38.5% by endotoxin in 100 neutrophils. Neutrophil Bactericidal Index values greater than four, indicative of poor antibacterial function,[8] were accompanied by stimulations of 7.3% with latex and 17.4% with endotoxin. Values between one and four appeared inversely correlated with stimulated dye reduction. Phagocytosis of latex appeared to be increased at higher Neutrophil Bactericidal Index values, with a mean phagocytosis of 73.9% with Neutrophil Bactericidal Index values greater than three and 47.3% with values from one to three. Depressed nitroblue tetrazolium reduction associated with increased phagocytosis appeared to be correlated with impaired neutrophil killing capacity and possibly NADH oxidase activity, but terminal glycolysis appeared to be otherwise intact.

A summary of data obtained to date is presented to demonstrate the apparent relationships between Neutrophil Bactericidal Index, phagocytosis, and nitroblue tetrazolium reduction and to present the

4. Average values for the percentage of cells in 100 counted polymorphonuclear (PMN) neutrophils demonstrating phagocytosis of latex particles and stimulated nitroblue tetrazolium (NBT) reduction are plotted against Neutrophil Bactericidal Index (NBI) values. Opsonic activity is approximately 95% or more maximum and is expressed as greater than a viable bacterial count of $\log_{10}$ 1.5.



basis for the observations presented in the preceding paragraph (Fig 4). Where opsonic activity was approximately 95% of normal (log_{10} viable bacterial count equaled 1.5 or more), these relationships existed between the parameters of neutrophil function measured. If opsonic activity was defective, however, phagocytosis of latex was accordingly decreased, as well as the degree of nitroblue tetrazolium dye reduction stimulated by these particles. Interestingly, endotoxin often was observed to stimulate nitroblue tetrazolium reduction in the face of opsonophagocytic deficiencies, suggesting the presence of a population of cells metabolically responsive although exhibiting these other abnormalities. Of further interest were the remarkable fluctua-

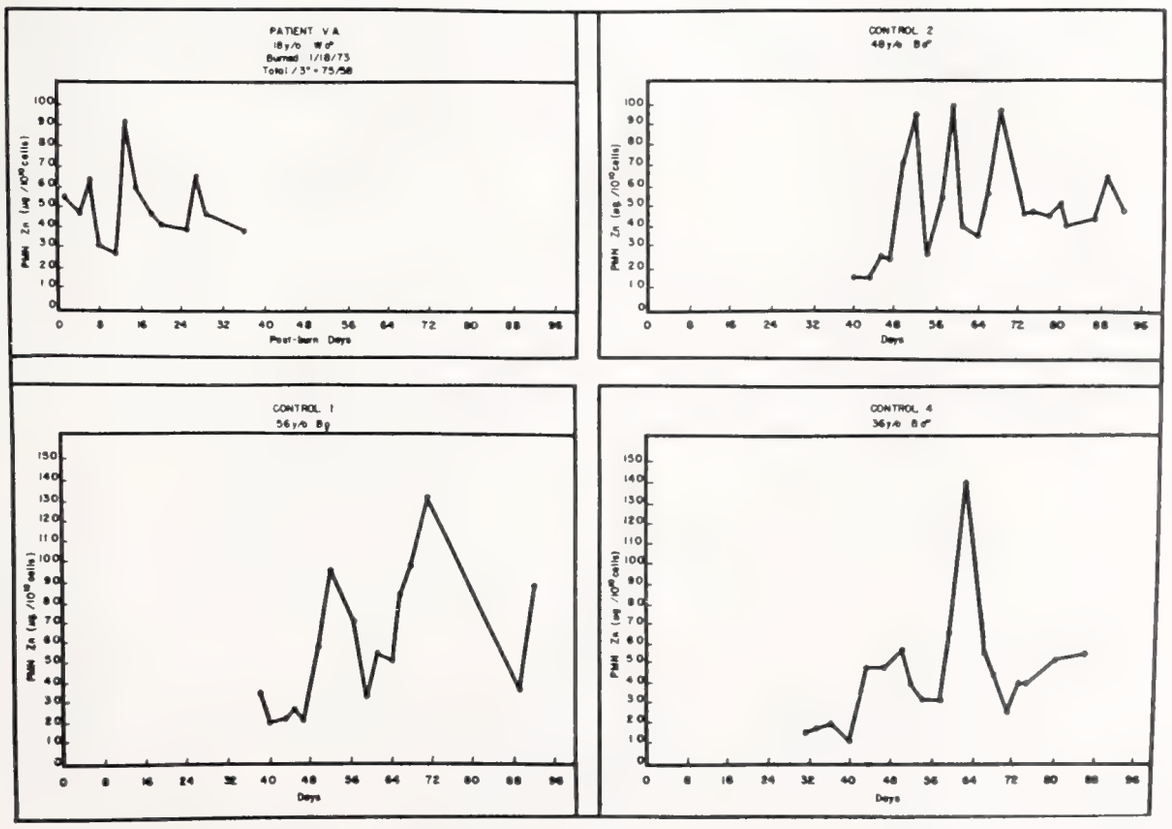


5. Cyclic fluctuations in the Neutrophil Bactericidal Index, phagocytosis, and stimulated nitroblue tetrazolium are represented in this burn patient. During postburn day 8-16 neutrophil function is seen to become deficient, as indicated by the increasing Neutrophil Bactericidal Index values and positive blood cultures, while phagocytic activity in this cell population increases the nitroblue tetrazolium reduction decreases. An intracellular killing defect is responsible for this episode of sepsis since opsonic activity was normal. After day 20 the metabolic defect is seen to disappear with the return of Neutrophil Bactericidal Index values to the normal range.

tions in multiple parameters of neutrophil function seen throughout the study. Overall neutrophil bactericidal activity seemed dependent on the relative efficiency of each component function, namely, opsonophagocytosis and intracellular killing. These findings mimic the cyclic variations in neutrophil activity described previously by Alexander et al[9] in both surgical patients and normal controls. In Fig 5, a representative patient record is presented to illustrate these fluctuations.

A most interesting observation coming forth in this study concerns the cyclic variations seen in neutrophil zinc content. Examples of burn patient and normal control zinc levels over a timespan are presented in Fig 6-9. Preliminary attempts to establish correlations between neutrophil zinc content and Neutrophil Bactericidal Index failed, but a suggestive correlation was obtained between phagocytic activity and zinc content, and these data are presented in Fig 10. Considerable variation was seen in the individual data points, and this was attributed to three factors: (1) the data were obtained from a heterogenous population of neutrophils with respect to functional activity, perhaps on the basis of cell age; (2) the nitroblue tetrazolium test utilized to determine the percentage of neutrophils demonstrating phagocytosis is a qualitative slide test; and (3) no correction was made for opsonic activity in these data. Fig 11 shows the few data points available associated with normal opsonic activity, and

6-9. Upper left shows cyclic fluctuations of polymorphonuclear neutrophil zinc content following a thermal injury to a patient. Other figures show similar cyclic changes in neutrophil zinc content in three normal adults studied concurrently with the burn patients.



it is suggested that neutrophil phagocytic activity is in part related to zinc content. Also of interest is the fact that zinc is the coenzyme for lactic dehydrogenase which converts pyruvate to lactate and effects the reduction in intracellular pH that influences certain antibacterial mechanisms. Further clarification of the trends noted in this study may unveil aberrations of neutrophil function due directly to nutritional factors which can be manipulated to the patient's advantage.

Conclusion

Neutrophil function is an exceedingly complex topic of investigational study, but it is already apparent that knowledge of metabolic activity and nutritional needs promises to afford the clinician a means with which to stimulate the phagocyte and enhance host defense against invasive sepsis. More specific and intelligent use of antibiotics would then be possible and alleviate the overwhelming problem of wound invasion by antibiotic resistant bacteria.

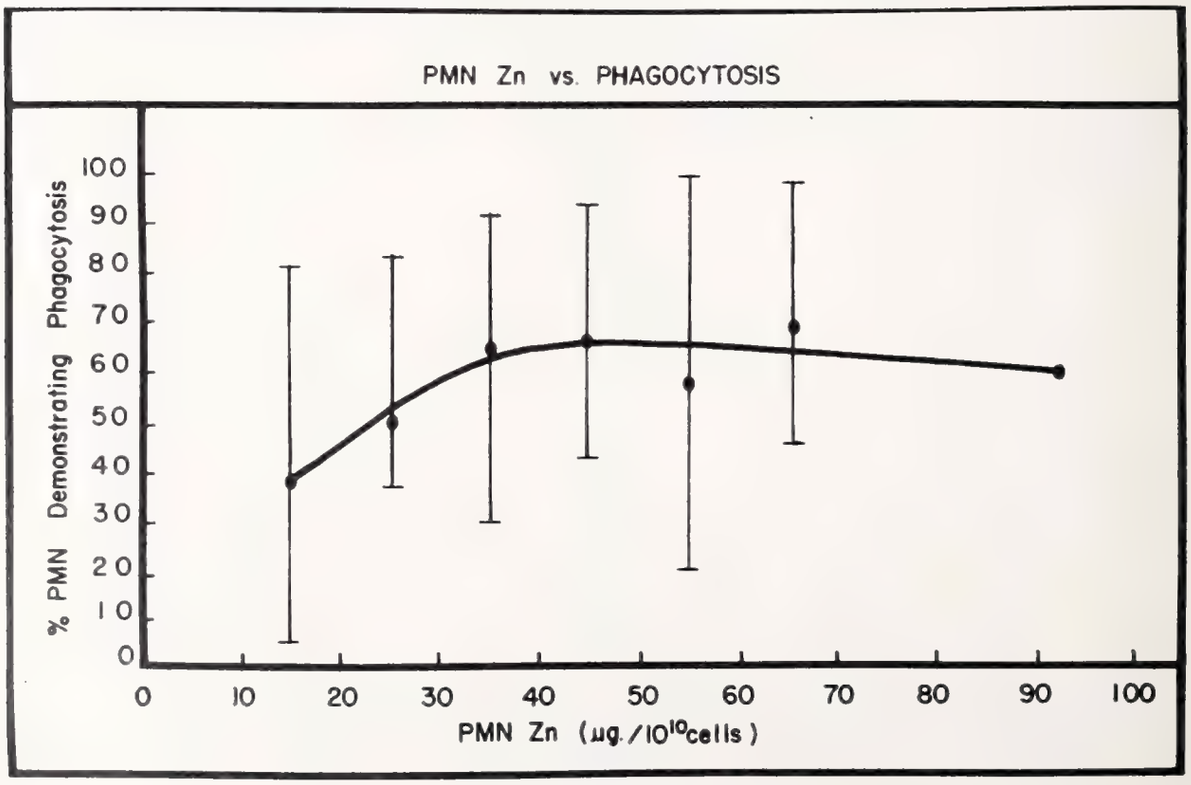
Dr. Lennard, Fellow in Surgical Infections and Immunology, Surgical Research Unit, Department of Surgery, University of Cincinnati College of Medicine, Cincinnati, Ohio 45229.

Dr. Petering, Professor of Environmental Health, University of Cincinnati College of Medicine, Cincinnati, Ohio 45229.

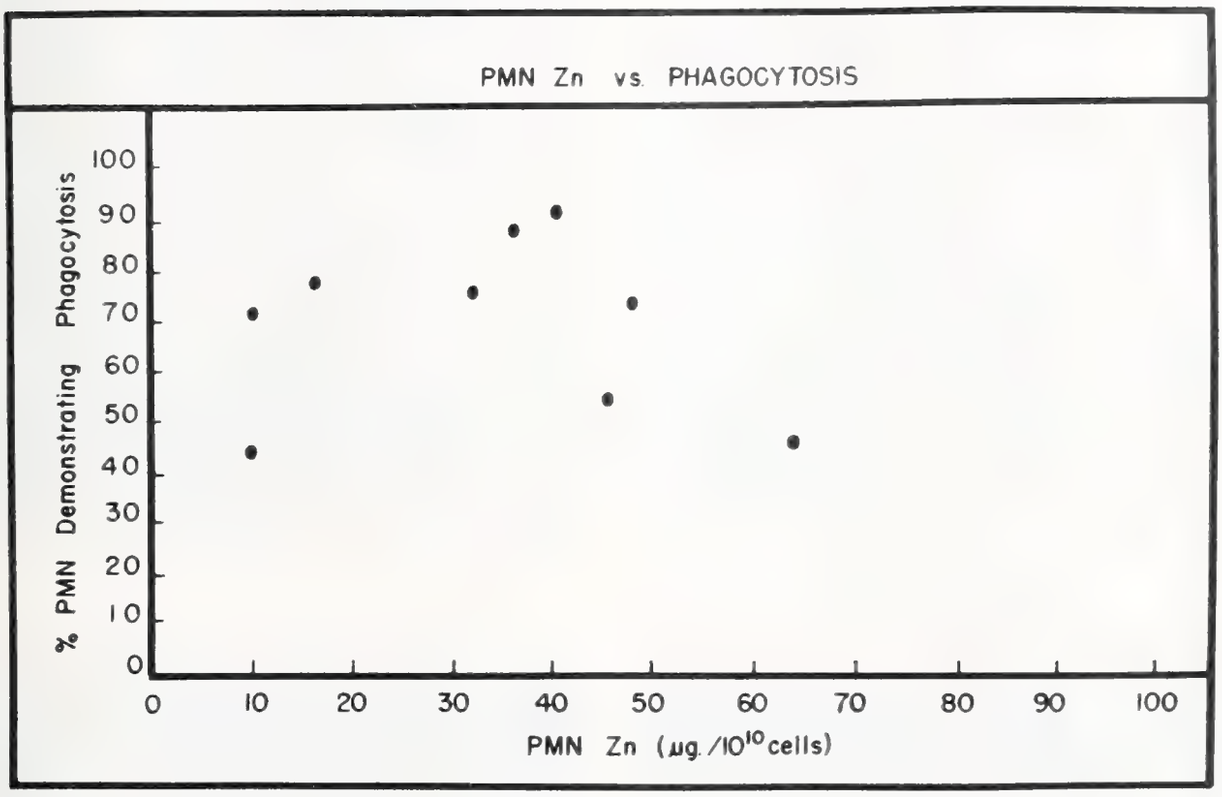
Dr. Alexander, Associate Professor, Department of Surgery, University of Cincinnati College of Medicine, Cincinnati, Ohio 45229.

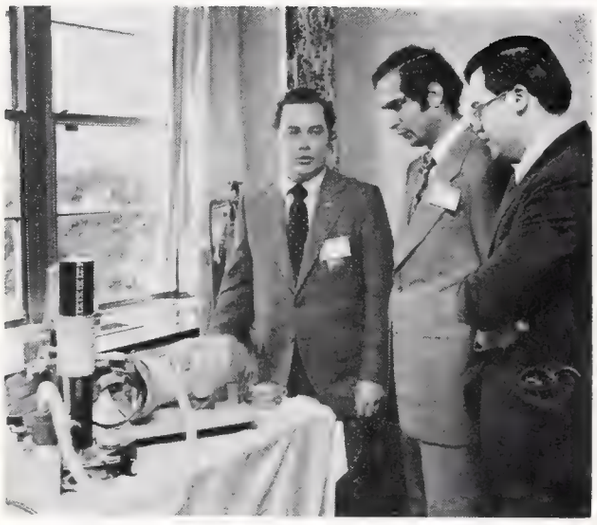
The authors' reference list is available on request from *Texas Medicine*, 1801 N Lamar Blvd, Austin, Texas 78701.

10. Relationship of average polymorphonuclear neutrophil zinc content to phagocytic activity is shown. No correction for opsonic activity is made.

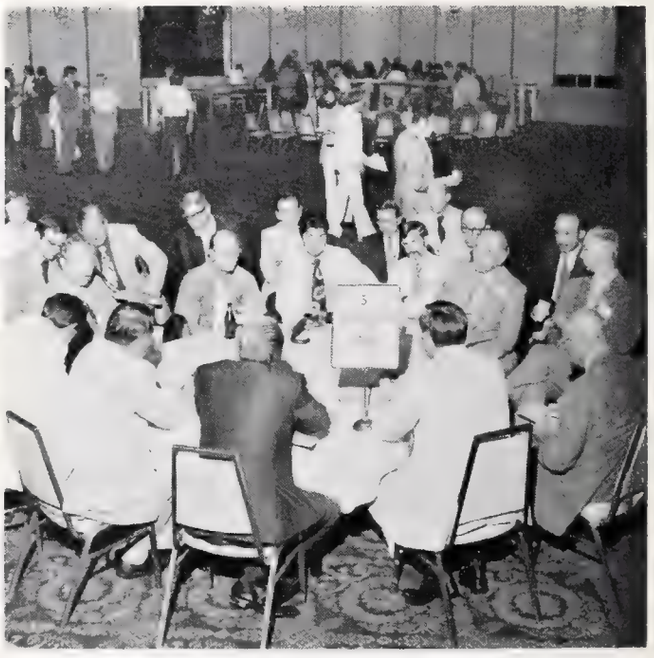


11. Relationship between polymorphonuclear neutrophil zinc content and phagocytic activity is shown only for those data where opsonic activity was determined to be above a viable count of $\log_{10}$ 1.5.



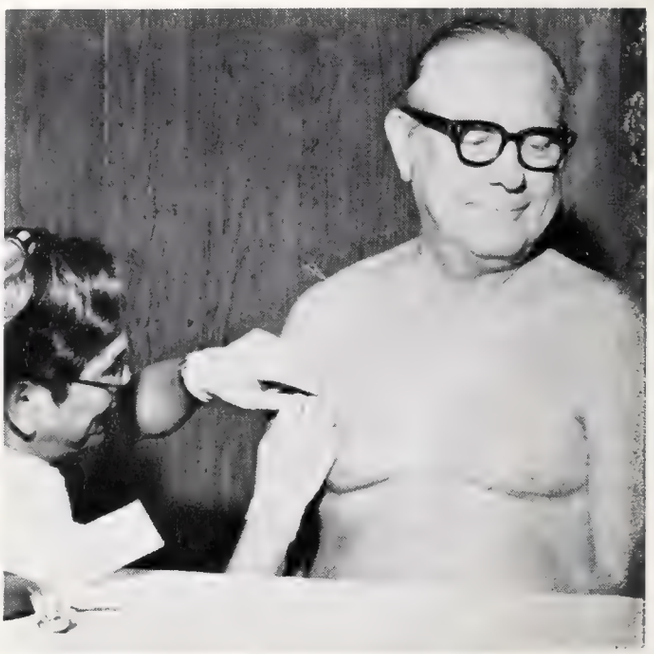


A basic life support-cardiopulmonary resuscitation demonstration was sponsored throughout Annual Session by the TMA, Harris County Medical Society, Houston Chapter of the American Heart Association, City of Houston Fire Department, and City of Houston Department of Public Health.



"Snakebites in Texas" was one of 20 Curbstone Consultations topics providing physicians the opportunity for informal, unrehearsed round table discussions.

The Astrodome scoreboard flashed a congratulatory message to C. Lincoln Williston during the Astros-Pirates game May 8.



Dr. Wen Jung Chiu demonstrated acupuncture for the Section on Family Practice. The willing patient is Dr. Thomas M. Tyndall of Beaumont.

registration reaches all time high...

Over 5,000 participants registered for the 107th Annual Session, an all-time record high for TMA.

TMA past president Dr. May Owen (right) and Dr. Charles A. Rush, Jr. of Fort Worth are pictured viewing some of the various entries in the Annual Session art exhibition.

Dr. Durwood Neal presented Anson Jones award plaques and $100 checks to the winners of the annual TMA news media competition. Mary Midkiff of *Houston Magazine* receives her award.

Posing together are the two presidents of the dermatological societies of Mexico and Texas, Dr. Josefa Novales, Mexico City, and Dr. Murray Riddell, Fort Worth. The two societies met jointly during the Annual Session for four days of scientific meetings and social events. Dr. Morris Waisman of Tampa, Fla was the featured guest speaker for the symposium on the deep mycoses. This meeting was the second joint gathering for the two groups.

Outstanding speakers, topics mark sessions...

W. Philip Gramm, PhD, professor of economics at Texas A&M University, was the featured speaker at the second general luncheon meeting.

Texas state senator A. R. "Babe" Schwartz of Galveston (left) and TMA trustee Dr. Joe T. Nelson of Weatherford (right) were among the many who greeted AMA president Dr. Russell Roth (center) following Dr. Roth's address to the Friday general meeting luncheon crowd of approximately 600.

Some of the people behind the scenes—(from l-r) Dr. Joseph M. Merrill, Houston, chairman, Committee on General Arrangements; Dale Willimack, Coordinator of Annual Session; and Council on Annual Session members Dr. William S. Derrick, Houston; Dr. Nicholas C. Hightower, Temple; Dr. Alice L. Smith, Dallas; and Dr. Nathan Cedars, Stephenville.

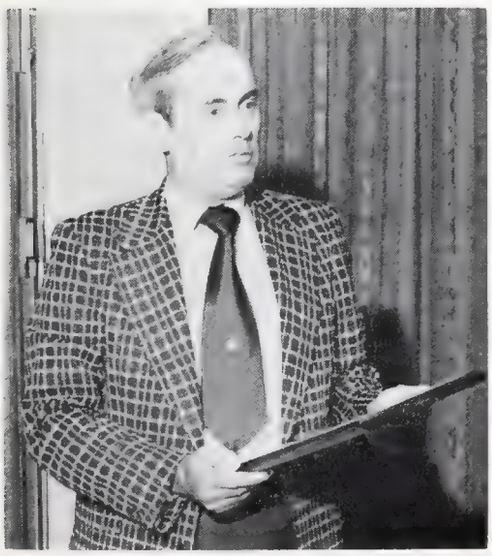
"The Doctor as a Witness" was the Continental Breakfast Presentation conducted by Dr. Harold L. Engel, LLB, (standing at right), one of 16 discussion leaders selected for the breakfast meetings.

delegates tackle full agenda...

The TMA House of Delegates, meeting for three sessions during Annual Session, faced one its most imposing agendas in the Association's history.

Jacki Sorensen of the President's Council on Physical Fitness and Sports demonstrated the basics of aerobic dancing before the Conference on School Health. Mrs. Sorensen was assisted by Houston area students.

Mrs. Richard B. Johns, 1973-74 president of the Woman's Auxiliary, addressed the opening session of the TMA House of Delegates.



Dr. Joseph T. Painter was presented a plaque of recognition by the current and past members of the Council on Tax-Financed Health Care Programs during a dinner in his honor.

Something for everyone... entertainment, sports, exhibits, new ideas

The Aesculapius Award for the outstanding scientific exhibit was presented to "Dangerous Plants, Snakes and Marine Life of the Southwest," a display prepared by four University of Texas Medical Branch members.

Two representatives of Houston Baptist University demonstrated proper taping techniques as used in athletics, part of a scientific exhibit sponsored by the Texas Society of Athletic Team Physicians and the TMA Committee on Athletics.

The tapestry, "Willow Springs Ranch" (left), won the best-of-show award in the Seventh Annual Physicians' and Wives Art Exhibition.

The team of Drs. Robert Gillett of Houston and Robert Mertz of Corsicana (left) challenged Drs. William Wolff and Irvin Robinson, both of Fort Worth, for the men's open doubles championship during the Annual Session tennis tournament. The two Fort Worth physicians won the doubles trophy. Dr. Wolff also took the men's open singles title and Dr. Mertz won the men's senior singles competition.

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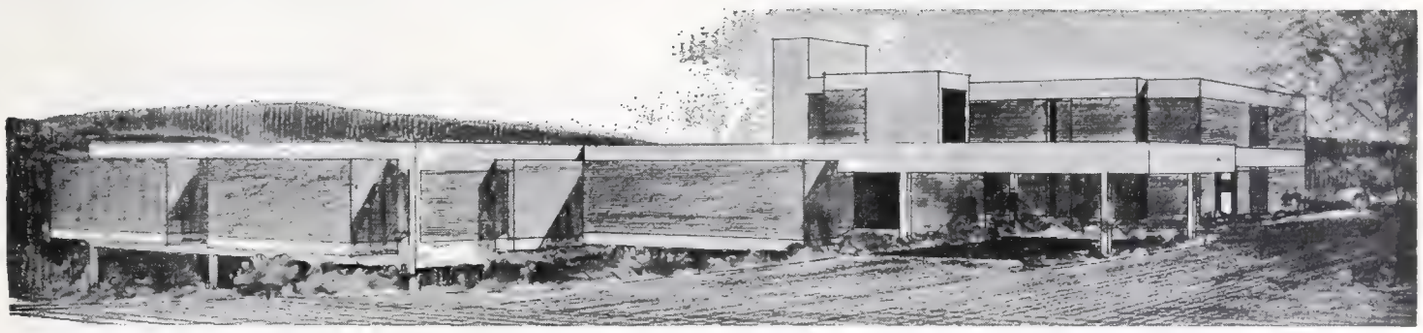

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The gift or donation may be made by a written instrument, including a will, and the gift will become effective upon the death of the donor without waiting for the probate of the will. Even if the will is later declared to be invalid for testamentary purposes, the gift is nevertheless valid and effective if it has been made in good faith.

The document indicating the gift, which may be a card designed to be carried on the person, must be signed by the donor in the presence of two witnesses.

Delivery of the document indicating the gift does not have to be made to any other person or institution during the lifetime of the donor in order to make the gift valid.

The donation may be made to a specified donee or without specifying such a donee. If the gift is made to a specified donee who is not available at the time and place of death, the attending physician upon or following death, in the absence of any expressed indication that the donor desired otherwise, may accept the gift as donee.

The physician who becomes a donee under this Act shall not participate in the procedures for removing or transplanting the organ or part of the body. The will, card or other document may be retained by the donor or may be deposited with any hospital, bank or storage facility or register office that accepts them for safekeeping or for facilitation of procedures after death. On request of any interested party upon or after donor's death, the person in possession shall produce the document for examination.

The donor may amend or revoke the gift by the execution and delivery to the donee of a signed statement or an oral statement made in the presence of two persons and communicated to the donee. Revocation or amendment of the gift may also be made by a statement addressed to an attending physician and communicated to the donee or by a signed card or document found on the person or in his effects.

Any document of gift which has been delivered to the donee may be revoked by the donor by any method set out above or by destruction, cancellation or mutilation of the document and the copies thereof. Also, any gift made by will may be amended or revoked in the manner provided for the amendment or revocation of wills or as set out herein.

The donee may accept or reject the gift. If the donee accepts a gift of the entire body, the surviving spouse or other person authorized to give all of any part of the decedent's body may authorize embalming and have the use of the body for funeral services, subject to the terms of the gift. If the gift is of a part of the body, the donee, upon the death of the donor and prior to embalming shall cause the part to be removed without unnecessary mutilation.

The time of death shall be determined by a physician who attends the donor at his death or the physician who certifies the death. This physician shall not participate in the procedures for removing or transplanting a part.

A person who acts in good faith in accordance with the terms of this Act is not liable for damages in any civil action or subject to prosecution in any criminal proceeding for this act so long as the prerequisites of an anatomical gift have been made as set out above.

Lastly, the Anatomical Gift Act is subject

to and in no way supersedes the powers and duties with respect to autopsies.

ANATOMICAL GIFT BY A LIVING DONOR

I am of sound mind and 18 years or more of age.

I hereby make this anatomical gift to take effect upon my death. The marks in the appropriate squares and words filled into the blanks below indicate my desires.

I give: ☐ my body; ☐ any needed organs or parts;

☐ the following organs or parts_____; to the following person (or institution):

☐ the physician in attendance at my death; ☐ the hospital in which I die; ☐ the following named physician, hospital, storage bank or other medical institution_____; ☐ the following individual for treatment

_____;

for the following purposes: ☐ any purpose authorized by law; ☐ transplantation; ☐ therapy; ☐ research; ☐ medical education.

Dated_____City and State_____

Signed by the donor in the presence of the following who sign as witnesses:

_____
Witness

_____
Witness

_____
(Signature of Donor)

_____
(Address of Donor)

Additionally, donations of a body or a part of the body by the next of kin may be effected by a person authorized to receive the body. While the law provides that a person who is authorized to receive the body may donate the body of deceased, difficulties may arise where two persons with equal authority, such as a brother and a sister, or two children of the deceased, disagree as to whether or not the anatomical gift shall be authorized. In such cases, the physician is well advised not to attempt to assist in the effectuation of the anatomical gift. However, if the parties all agree that they wish to authorize such a donation, the following form may be used.

ANATOMICAL GIFT BY NEXT OF KIN OR OTHER AUTHORIZED PERSON

I hereby make this anatomical gift of or from the body of_____ who died on_____at the _____in_____.

The marks in the appropriate squares and the words filled into the blanks below indicate my relationship to the deceased and my desires respecting the gift.

I am the surviving: ☐ spouse; ☐ adult son or daughter; ☐ parent; ☐ adult brother or sister;

☐ guardian; ☐ _____, authorized to dispose of the body;

I give ☐ the body of deceased; ☐ any needed organs or parts;

☐ the following organs or parts_____; to the following person (or institution)_____ (insert the name of a physician, hospital, research or educational institution, storage bank or individual),

For the following purposes: ☐ any purpose authorized by law; ☐ transplantation; ☐ therapy; ☐ research; ☐ medical education.

Dated_____City and State_____

_____
(Signature of Survivor)

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(Address of Survivor)

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Even the elegant Yacht Club blends into its surroundings, through the creative use of native woods and stone. The mild, sunny climate makes Horseshoe Bay ideal year round for outdoor sports.

For 3 days and 2 nights, all this will be yours . . . .

You and your family will share a spacious suite, complete with kitchenette and fireplace. You'll enjoy fine food, a refreshing atmosphere, and everything from golf and tennis to fishing along a quiet stream. You'll find our rates very reasonable.

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- ☐ Further information on your Doctor's Holiday, including registration materials.
- ☐ Your Leisure Property PORTFOLIO containing documented information on investment possibilities in the Texas Hill Country.

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MEDICINE AND THE LAW

A jury verdict in favor of a physician in a malpractice case was upheld by Appeals Court. Issues raised by the plaintiffs related to 1) failure to order additional examinations, tests, and procedures; 2) failure to use other drugs; 3) failure by family doctor to consult with specialist; and 4) use of medical text book in direct testimony.

FACTS: The husband and as next friend for several minor children, the estate of the deceased, and several adult children brought this suit against a doctor for wrongful death resulting from alleged malpractice in connection with surgery and treatment. The estate brought the suit for pain and suffering, and the other parties sought recovery for the loss of a wife and mother. The trial court, at the close of the plaintiffs' case, instructed a verdict for the doctor. The jury found in response to certain special issues that the doctor was not guilty of any negligence. In addition, the jury answered "none" to the questions relating to damage issues. Judgment was entered that plaintiffs take nothing, and the plaintiffs appealed.

The defendant was the family doctor of the deceased patient. The deceased consulted him about complaints which gave rise to the surgery. The family physician recommended that she go to a specialist in obstetrics and gynecology. The specialist advised the patient that she needed a vaginal hysterectomy and some minor restructuring work in her abdominal cavity. Surgery was performed by the specialist and assisted by the family doctor. After the surgery the patient developed complications evidenced by abdominal distention, fever, and "ileus" (a cessation of muscular activity of the colon, resulting in an inability to pass fecal matter.)

The distention was relieved several times by the use of a nasal gastric tube and slush enemas. Subsequently an internist was called in. He ordered x-rays and after examination recommended that surgery be considered immediately. On the same day another surgeon was also called in, but the surgery was postponed in order that the patient's physical condition could be improved to better withstand surgery. Her condition continued to be poor and subsequently the internist performed an exploratory laparotomy. This operation resulted in the finding of an infection of the vaginal cuff where the uterus was severed in the hysterectomy. The colon was adhered to this infection and was infected itself. Approximately two feet of the colon was removed, and an attempt was made to clean out all the remaining infection. Despite these efforts, the patient died apparently from a massive pelvic infection and congestive heart failure.[1]

HOLDING: That the testimony did not warrant submitting an issue to the jury on the failure to perform vaginal examinations, the use of nasal gastric tube and slush enemas, failure to obtain additional bacteria cultures, additional consultation, the use of other drugs, and the failure to obtain more timely and adequate examinations. That the trial judge properly did not allow the use of medical text books as direct evidence in a malpractice case. That the jury's verdict in favor of the physician was supported by the evidence.

REASONING: The court stated that the trial court properly refused to submit a number of instructions relating to the alleged failures which were all without support and evidence. The court stated that there was absolutely no testimony that the doctor's action in this regard failed to meet the standards of good medical practice. At the most there was testimony that other courses of action *could* have been taken, but not that they *should* have been. Since these issues were not raised by the evidence they were properly refused.

In relationship to the failure of the trial court to allow issues relating to the failure to obtain x-rays, the failure to perform exploratory surgery prior to a certain date, and a failure to submit the patient to surgery were properly refused because there

were shades and phrases of submitted issues.

With reference to the question of the refusal to allow an issue relating to the physician's duty to consult a specialist, the court held that this refusal to submit this issue was proper because it could not have aided the jury in answering issues. There was no evidence that the gynecologist failed to obtain proper consultation.

The jury found that there was no evidence as a matter of law indicating negligence in a delay in surgery. The plaintiff failed to introduce expert testimony that the delay was based on anything but a prudent course of medical action. The failure to take x-rays (shown to be diagnostic tools) was not shown to be the proximate cause of the patient's death. Furthermore, the court said it was not established as a matter of law that it was negligent to fail to perform a rectal examination between certain dates in view of the expert testimony that there was no indication that an additional examination was necessary.

In relationship to the medical text question, the court stated that the law in Texas is such that standard medical text cannot be introduced to be direct evidence. If, when a doctor testifies as an expert with regard to diseases or injury, he states that he recognized a medical text as standard authority, excerpts may be read from that text not as direct evidence but solely to discredit or test the weight of his testimony.[2] In this case the specialist refused to recognize any texts as authorities, even though he admitted using some of them in obtaining his medical knowledge. The court stated that the rule regarding the exclusion of medical texts was well established by the Supreme Court and was applied in this case.

In relationship to the question of lack of informed consent, the court stated there was absolutely no evidence to support negligence in this case. The court stated that the family physician was the primary physician and had the ultimate liability and responsibility for determining the proper course of diagnosis and treatments. The plaintiffs must prove both negligence in treatment or diagnosis and that such negligence was the proximate cause of the injuries. Because of the relationship between the family doctor and the specialist, it is clear that even if the family doctor was guilty of some negligence it was not a proximate cause of the patient's death.

CONCLUSION: The court, presented with the above facts, found that the family doctor did not violate the accepted standard of care in failing to consult with a specialist. The court said once a patient is referred by a family doctor to a specialist, the specialist had the responsibility for determining the proper course of diagnosis and treatment. The family doctor's action in this case in post operative complications was not a proximate cause of death. The court upheld the general rule that text books cannot be used as direct evidence regarding malpractice. The fact situation and the jury verdict in this case reflected the plaintiffs' failure to prove that the defendant doctor did not exercise the degree of skill and care and judgment ordinarily exercised by physicians in the same or similar community in the light of existing medical knowledge.

TMA Office of General Counsel
Ace Pickens

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1. *Seeley vs. Eaton,* 506 S.W. 2d 719, (Tex. Civ. App. Jan 30, 1974).

2. *Bowles vs. Bourdon,* 219 S.W. 2d 779 (Tex. 1949).

Questions/Answers

Editor's note: The following are additional questions taken from the brochure, "Careers in Dentistry and Medicine—64 questions and answers," compiled by The University of Texas System. Previously carried in the February and April issues, questions from this brochure will appear throughout the year in *Texas Medicine*. Copies are available from the UT Medical and Dental Application Center, 800 Brazos, Suite 801, Austin 78701.

Q How does one select the school to which he wishes to apply?
A One should visit the schools whenever possible, study their catalogues, talk to the faculty and students, talk to graduates of these schools, and discuss the problem with pre-professional advisors. He should consider his career goals and his economic resources. He should apply to several schools, including at least one that he expects to accept him, several at which he will be borderline, and at least one at which he has only a slim chance of acceptance. Geography may also be a factor in his choice.

Q Whom should an applicant contact for a pre-professional evaluation if he has not been a full time student for two or more years?
A The evaluations by former college teachers are still needed. If employed or in the military since leaving school, the applicant should also solicit evaluations from his supervisors.

Q If a student is employed during college is this taken into account by The Admissions Committee?
A Yes. The amount of employment could help explain a slightly lower GPA and the lack of extra-curricular activities.

Q What materials should an applicant assemble or ask his school to assemble to assist the Admissions Committee?
A 1) All application forms completed and signed where appropriate. 2) Official transcripts of course work and grades directly from all academic institutions attended. 3) An evaluation of the applicant from the Health Professions Advisor or Advisory Committee. 4) Scores on the MCAT or DAT. 5) A non-refundable filing fee, based on the number of schools to which an applicant is applying.

Q Basically and briefly, what are the academic requirements for admission to dental and medical schools of The University of Texas System?
A One year of general chemistry with lab, one year of organic chemistry with lab, two years of biology (one year must include lab), one year of physics with lab, one year of English, and one half year of calculus (not required for admission to dental school) with grades of "C" or better in each course (all college level).

Q If an applicant is not accepted and he wishes to make application again the following year, is it advisable for him to take graduate work while he is waiting for his next chance?
A The student needs to examine this question in relation to the reason he was not accepted. He should try to fill the gaps in his knowledge and raise his GPA with whatever courses he takes. He should repeat the DAT or MCAT if his scores are low. Realistically, he should begin to prepare himself for his second choice in careers in the event he is never accepted into medical or dental school.

Q Does an applicant improve his chances by having a masters or doctorate degree?
A All of an applicant's credentials are considered. If the credit or advanced degree is in an area that is related to the profession, and if it is recent, it would be interpreted as an aid to him. But the mere acquisition of hours or of degrees does not automatically assure the applicant of any special consideration.

Q Will financial needs hurt an applicant's chances for being accepted?
A No, although financial needs may cause a person to withdraw his application or turn down an acceptance.

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   B. How to accumulate your dollars for investments.
2) How to utilize your tax dollars for economic gains
3) Understanding the principle of leverage
4) Things you must know before buying any:
   A. Improved property (shopping centers, apartments)
   B. Raw Land
5) The art of negotiating a contract to buy or sell real estate
6) What to look for in an attorney
7) What to look for in an accountant
8) Discussion on pros and cons of
   A. Keogh Plan
   B. Insurance as protection
   C. Stock market
   D. Raw land
   E. Purchasing or developing
   F. Professional Inc.
   G. Apartments or shopping centers
9) How to get the best real estate deals brought to you by real estate brokers
10) How to purchase real estate with *no* personal liability
11) How to finance real estate purchases
12) How to make "tax free" dollars on your financing
13) How to determine the value of:
   A. Raw land
   B. Improved property
14) Amount of return to expect on your investment in:
   A. Raw land
   B. Improved property
15) Building the $100,000 or $1,000,000 estate
16) Land leases
17) The "musts" of a legal contract to purchase raw land
18) How to drive the price of your property and surrounding property up
19) Difference between Speculation and Investing
20) Real Estate the basis of all activity and wealth

This lecture is strictly for the information and education of the audience. (No tape recorders allowed during lecture)

Pre-registration fee is $200. Fee at the door will be $300. Send your check payable to Professional Lecture Series, c/o Ron McConnell, DDS, 400 So. Cottonwood, Richardson, Texas 75080. To insure your reservation, don't delay. Pre-registration will end five (5) days prior to each seminar. For more information, call (214) 235-4300.

Medical Newsmakers

BARRY BUCHELE, a third-year student at The University of Texas Medical School at San Antonio, has been named to the newly-established Committee on Student and Resident Affairs of the American Academy of Family Physicians. He will serve through Dec 31, 1974.

President-elect of the Southwestern Psychological Association is HARRY J PARKER, PhD, associate dean of the School of Allied Health Sciences, The University of Texas Health Science Center at Dallas. Dr. Parker has also served as secretary-treasurer and convention chairman for the organization.

DR. HAL T WEATHERSBY, professor of anatomy at The University of Texas Southwestern Medical School at Dallas, has been re-elected president of the Anatomical Board of the State of Texas for another three-year term. The board, composed of members from the departments of anatomy and surgery of each medical and dental school in Texas, supervises the use of all anatomical material.

DR. FELIX N RUTLEDGE of M D Anderson Hospital and Tumor Institute, Houston, was named president-elect of the American Radium Society at its annual meeting in Maui, Hawaii. He will become president of this society at its next annual meeting in Bermuda in May, 1975.

DR. HOWARD DUDGEON, JR, Waco surgeon, was installed president of the Texas Surgical Society in April.

DR. DONALD W SELDIN, professor and chairman of the department of internal medicine at The University of Texas Southwestern Medical School at Dallas, was elected to fellowship in the American Academy of Arts and Sciences in Boston. The Academy is the second oldest learned society in the United States.

Effective Apr 15, DR. JOHN D CHASE is the chief medical director of the Dallas Veteran's Administration Hospital. Dr. Chase comes to Dallas from the VA in Tacoma, Wash, where he was director.

DR. ROBERT D MORETON of Houston was awarded the Gold Medal of the Texas Radiological Association for his outstanding contributions to the practice of radiology in Texas. Dr. Moreton is a radiologist who serves as vice president for professional and public affairs at The University of Texas System Cancer Center.

Tyler urologist, DR. C V CHENOWETH has been elected president of the Texas Urological Society. Dr. Chenoweth also serves as president of the Smith County Medical Society.

Medicine in literature

Confessions of a Gynecologist, Anonymous, MD, 360pp, New York, Doubleday, 1972, $7.95

Behind his facade of detachment, what does a gynecologist really think and feel about his profession and his patients? Not many physicians would care to reveal their most personal thoughts, but in this book, a dedicated "women's doctor" has done just that. The author tells how he reacts when a patient makes a pass at him, how he spots "husbanditis," how he knows which women will make good mothers, and how he deals with such female oddities as pregnant virgins.
On the more serious side, the doctor explains why he opposes "natural childbirth" and believes that fathers should not be in the delivery room. He gives sound pointers on how to tell the sex of an unborn child, and warns expectant mothers about the most worrisome aspects of many pregnancies. Rounding out the book, he tells of new developments in his field—such as electronic devices that give him "inside information" during labor and advances in birth control that make "zero population growth" a realistic goal—plus a close-up look at how a gynecologist is trained.

IN THE TMA LIBRARY

Anderson Odin W: *Health Care: Can There Be Equity? The United States, Sweden, and England,* New York, Wiley & Sons, 1972

Beck Mary E: *Nutrition and Dietetics for Nurses,* ed 3, Baltimore, Williams & Wilkins, 1971

Benyak Janet M (ed): *HMO Sourcebook 1973 Edition,* Rockville, Md, Health Law Center, 1973

Biossat Bruce: *Medicare & Social Security—What You've Got Coming,* ed 4, Garden City, NY, Doubleday, 1973

Coles Robert: *Farewell to the South,* Boston, Little, Brown and Co, 1972

Doman Glenn: *What to Do About Your Brain-Injured Child,* New York, Doubleday, 1974

Hanna J Marshall, Popham Estelle L, Beamer Esther Kihn: *Secretarial Procedures and Administration,* ed 5, Dallas South-Western Publishing Co, 1968

Johnston Robert F (ed): *Pulmonary Care,* New York, Grune & Stratton, 1973

Kaplan Henry S: *Hodgkin's Disease,* Cambridge, Mass, Harvard University Press, 1972

Kaplan Norman M: *Clinical Hypertension,* New York, Medcom Press, 1973

Kempe C Henry, Helfer Ray E (eds): *Helping the Battered Child and His Family,* Philadelphia, Lippincott Co, 1972

Krause Marie V, Hunscher Martha A: *Food, Nutrition and Diet Therapy,* ed 5, Philadelphia, WB Saunders Co, 1972

Krupp Marcus A, Chatton Milton J: *Current Medical Diagnosis & Treatment,* Los Altos, Lange Medical Publications, 1974

Mergenhagen Stephan E, Scherp Henry W (eds): *Comparative Immunology of the Oral Cavity,* Bethesda, US Department of Health, Education, and Welfare, 1973

Modell Walter (ed): *Drugs of Choice 1974-1975,* St Louis, CV Mosby Co, 1974

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

P C Clements
Lufkin, 1892-1974

J L Cooper
Arlington, 1932-1973

T T Peck, Jr
Centerville, 1923-1974

C B Shaddock, Jr
Beaumont, 1912-1974

C G Swift
Cameron, 1897-1974

E F Yeager
Mineral Wells, 1893-1974

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

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Recent deaths

Dr. P C Clements

Retired physician, Dr. Peyton C Clements died Jan 26, 1974, in Lufkin, at the age of 81 years.

Born in Timpson, Tex, Dr. Clements was the son of pioneer East Texas physician, Dr. Edgar B Clements and Valeta Booth Clements. He was graduated with an MD degree from the University of Tennessee College of Medicine, Memphis, and completed an internship at City of Memphis Hospitals, Memphis, Tenn. He served in World War I, nine months of which was in France as Assistant Division Surgeon of the 36th Division. After returning to the States he did private practice with his father in Timpson, Tex. In 1936 he moved to Lufkin where he continued his practice until his retirement in 1966.

He served as chief of staff of both Memorial and Woodland Heights Hospitals of Lufkin, as well as chief of obstetrics and gynecology and chief of surgery at Woodland Heights Hospital. In addition he served as president of the Angelina County Medical Society and Tenth District Medical Society, and was awarded honorary memberships in both Texas Medical Association and American Medical Association.

Dr. Clements is survived by his wife Mary Jo Turner Clements, Lufkin; two daughters, Mrs. Frances Bickford, Fort Worth, and Mrs. Patricia Schoen, St Louis, Mo; one brother, Dr. E B Clements, Cleveland, Tex; one sister, Mrs. Harriet Taylor, Timpson; five grandchildren; and two great-grandchildren.

Dr. J L Cooper

Arlington anesthesiologist, Dr. Jack Lamar Cooper died Dec 27, 1973, at the age of 41.

Dr. Cooper received a BA degree from The University of Texas at El Paso and earned his MD degree from The University of Texas Southwestern Medical School at Dallas. He served internships at R E Thomason General Hospital, El Paso, and Presbyterian Hospital of Dallas, and a residency in anesthesiology at Parkland Memorial Hospital, Dallas. Following his residency, he established his practice in Arlington and remained there until his death.

He was a member of Tarrant County Medical Society, American Society of Anesthesiologists, Texas Medical Association, and American Medical Association.

Dr. Cooper is survived by his wife, Arlyn Long Cooper, Arlington; two sons, Cary and Jeffrey Cooper, one daughter, Mrs. Lorraine Corevich; mother, Mrs. Lois Harp; all of California; three sisters and two brothers.

Dr. Clements

Dr. Yeager

Dr. E F Yeager

Dr. Edward Frank Yeager died Jan 6, 1974. He had been city health officer in Mineral Wells for 40 years.

Dr. Yeager was born in Mineral Wells in 1893. He was graduated from The University of Texas Medical Branch at Galveston in 1917, and interned at Scott and White Memorial Hospital, Temple. Following a residency at Detroit Receiving Hospital, Detroit, Mich, Dr. Yeager returned to Mineral Wells to practice internal medicine. He retired Jan 1, 1974.

Dr. Yeager's medical memberships included Palo-Pinto County Medical Society, Texas Medical Association, Southern Medical Association, and American Medical Association.

He is survived by his wife, Laura Allen Yeager, Mineral Wells; two sisters, Mrs. Ruth Stoker, Mineral Wells, and Mrs. Elizabeth Fussell, McCamey; and brother, A A Yeager, Miami, Fla.

Dr. Shaddock

Dr. Swift

Dr. C B Shaddock, Jr

Dr. Carroll Bitting Shaddock, Jr, 62, died Jan 6, 1974, in St Elizabeth Hospital, Beaumont. Cause of death was a heart attack.

A native of Beaumont, Dr. Shaddock received his preliminary education in Beaumont and was graduated from Baylor College of Medicine, then located in Dallas. He interned at Baylor University Medical Center, Dallas, and completed a residency at Providence Hospital, Waco. In 1939, he established a medical practice in Beaumont. With the outbreak of World War II, he served five years in the US Army, three of which were in the South Pacific, attaining the rank of major. Following his discharge in 1945, he established a medical practice in Orange, where he remained until his death.

Dr. Shaddock was a member of Orange County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Hulda Gaertner Shaddock, Orange; daughter, Mrs. Patricia Gail Cook, Dallas; three sons, Carroll Sidney Shaddock, Houston, Peter Henry Shaddock, Dallas, and William Charles Shaddock, Orange; and seven grandchildren.

Dr. T T Peck, Jr

Dr. Tristam Temple Peck, Jr, died Jan 8, 1974, following a heart attack. The 50-year-old family physician had practiced in Centerville since 1961.

A native of Oklahoma, Dr. Peck served with the US Navy during World War II, prior to entering Baylor College of Medicine, Houston, where he graduated in 1950. He completed an internship at US Naval Hospital, Pensacola, Fla, and a residency at C F Menninger Memorial Hospital, Topeka, Kan. Following a ten-year medical practice in Baytown, Dr. Peck moved to Centerville where he remained until his death.

He was a member of Sir William Osler Society, American Academy of Family Physicians, American Society of Psychosomatic Medicine, Brazos-Robertson County Medical Society, Texas Medical Association, and American Medical Association.

The physician is survived by his wife, Ruby Rose Corley Peck; daughter, Mrs. Terry Rose Jones, Houston; son, Larry Temple Peck, Huntsville; and parents, Mr. and Mrs. T T Peck, Baytown.

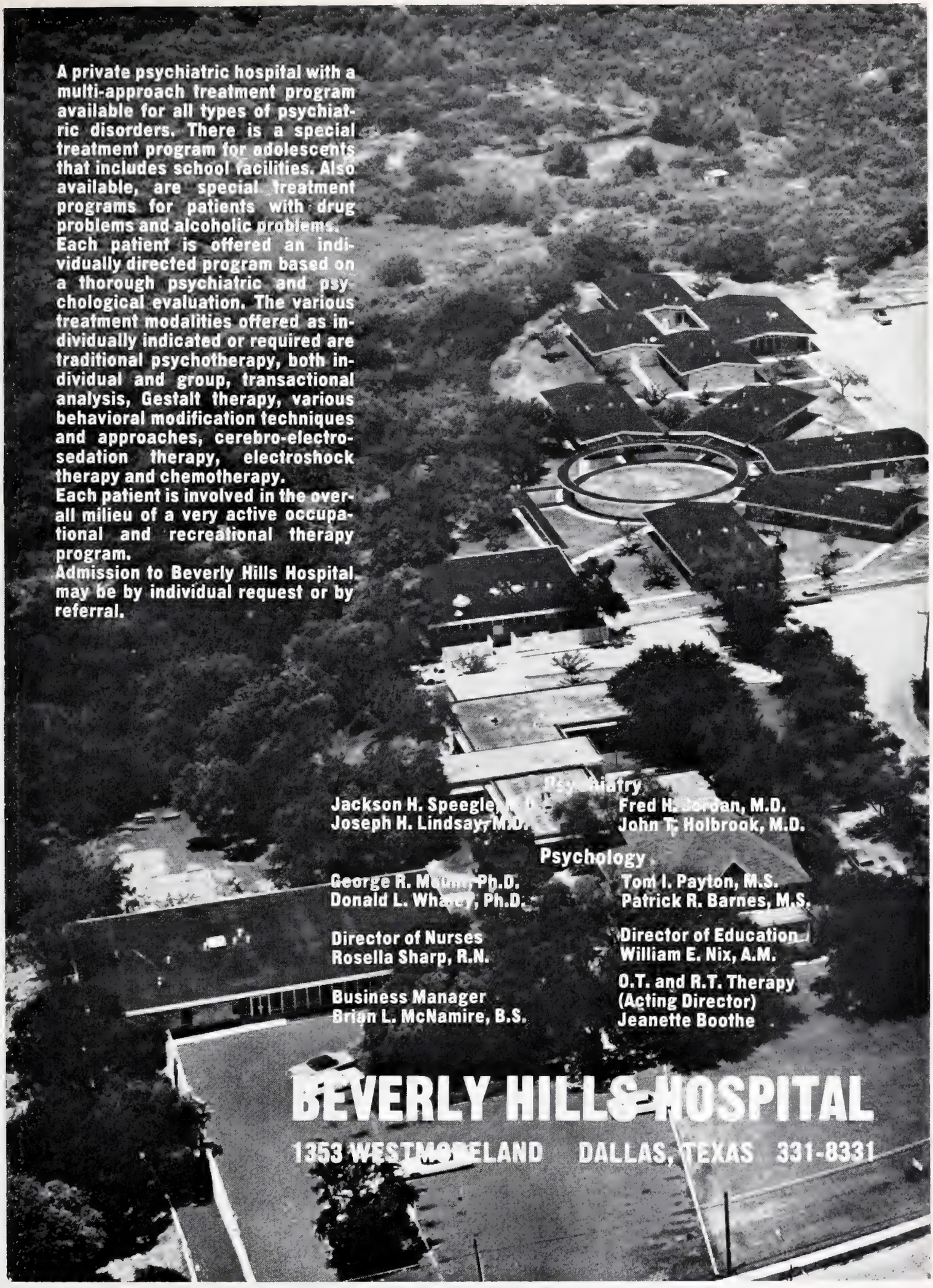
Dr. C G Swift

Dr. Clifford Gibson Swift, family physician and surgeon in Cameron for 38 years, died Jan 22, 1974. He was 76 years old.

Dr. Swift earned a BS degree from The University of Texas at Austin and an MD degree from The University of Texas Medical Branch at Galveston. He interned at St Luke's Hospital Center and St Francis' Hospital, New York, and returned to Texas where he established a medical practice in Waco. After 12 years, he moved his practice to Cameron where he remained until his death.

In addition to his membership in American Academy of Family Physicians, Dr. Swift was an honorary member of Texas Medical Association and American Medical Association. He was also a past president of Milam County Medical Society.

The physician is survived by his wife, Shirley Johns Swift, Cameron; son, Clifford G Swift, III, Houston; two daughters, Mrs. Ann Duncan, Waco, and Mrs. Laura Collins, Tyler; brother, Stanley Swift, Waco; and six grandchildren.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*Urethritis, cervicitis, proctitis when due to susceptible strains of *N. gonorrhoeae*

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Trobicin is not effective for any stage of syphilis. Trobicin may mask or delay the symptoms of incubating syphilis. If concurrent syphilis is suspected, follow the patient serologically for at least 3 months. Patients with syphilis should receive adequate specific anti-syphilitic therapy with an appropriate antibiotic.
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Indications: Acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

Contraindications: Contraindicated in patients previously found hypersensitive to spectinomycin.

Warnings: Not indicated for the treatment of syphilis. Antibiotics used to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Patients should be carefully examined and monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected.
Safety for use in infants, children and pregnant women has not been established.

Precautions: The usual precautions should be observed with atopic individuals.
Clinical effectiveness should be monitored to detect evidence of development of resistance by *N. gonorrhoeae*.

Adverse reactions: The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.
During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single- and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

Dosage and administration: Keep at 25° C and use within 24 hours after reconstitution with diluent.
Male—Inject 5 ml intramuscularly for a 2 gram dose. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.
Female—Inject 10 ml intramuscularly for a 4 gram dose.

How supplied: *Vials, 2 and 4 grams—with ampoule of Bacteriostatic Water for Injection with Benzyl Alcohol 0.9% w/v.* Reconstitution yields 5 and 10 ml respectively with a concentration of 400 mg spectinomycin per ml (as the hydrochloride). For intramuscular use only.
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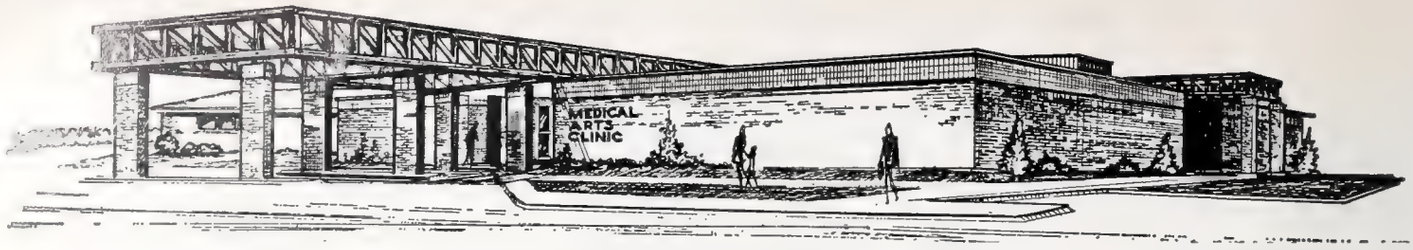
†For patients with gonorrheal proctitis and for patients in geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams is preferred.



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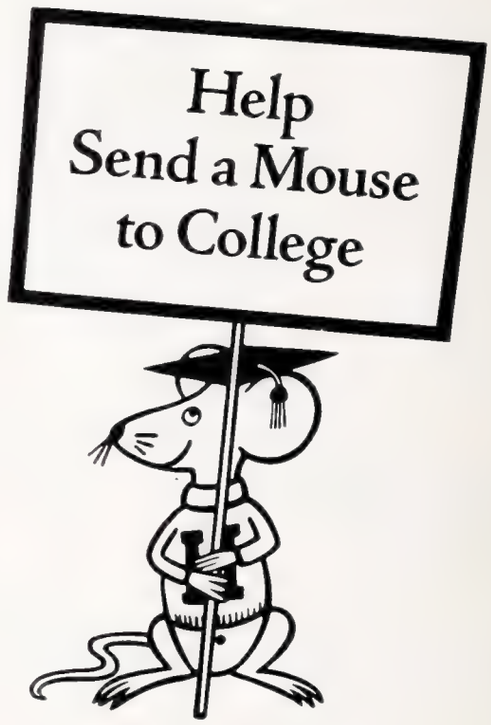

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FAMILY PRACTICE with two other physicians. 50 bed hospital adjacent to clinic. Two nursing homes located in town. Large patient drawing area, good fishing, hunting, 8 miles to Lake Whitney, excellent schools, churches, and progressive small town. Guaranteed salary until established, partnership available in future. Contact Morris R. Hill, M.D. or James G. Barton, M. D. at Barton & Hill Medical Association, P. O. Box 546, Whitney, Texas 76692; phone AC817-694-2221.

FAMILY PHYSICIAN: This is an opportunity you should look into. Three family practice physicians need fourth man. No capital outlay, equal privileges, no buy-in, guarantee until established, set your own pace. Clinic, 40-bed hospital, 44-bed extended care, accredited by JCAH. Contact Ray W. Freeman, M.D., Chief of Staff, or Gordon Russell, Administrator, Hi-Plains Hospital-Clinic, 203 West 4th, Hale Center Texas 79041. Call 806, 839-2471.

NEEDED—INTERNIST TO ASSOCIATE with three busy GP's in Central Texas university town. No internist in area. Should be nice place to live and work. Please reply to Ad-457, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

THREE PHYSICIANS NEEDED. FAMILY PRACTICE PHYSICIAN, INTERNIST AND SURGEON needed to join a full time, five man clinic association group with part time radiologist and clinical pathologist in Clifton, Texas. Located in the heart of Texas, 35 miles NW of Waco, 15 miles from Lake Whitney. Good fishing, excellent hunting, new, recently completed, modern golf course. Excellent schools, churches and growing progressive small town. Closely associated with new 65-bel hospital facility, which is fully accredited by the Joint Commission. Suggest salary at first with partnership in future. Financial terms open. Please contact V. D. Goodall, M.D., Clifton Medical and Surgical Clinic Association, Clifton, Texas 76634. Telephone 675-8621 or 675-3113.

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WANTED: PHYSICIAN TO JOIN GENERAL SURGEON AND GENERAL PRACTITIONER in small town. Privately owned clinic and hospital combination. Guaranteed salary. Prefer family practice specialist. For additional information, please contact M. A. Childress, M.D., P.O. Box 289, Goldthwaite, Texas 76844; Phone 915-648-2212.

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PSYCHIATRIST WANTED: Board certified or eligible, bilingual (Spanish & English) psychiatrist interested in Day Care concept to join the Staff of the El Paso Psychiatric Clinic. Apply Director, El Paso Psychiatric Clinic, 2616 North Oregon, El Paso, Texas 79902.

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ALLERGIST—Board certified or eligible. Join growing solo practice North Central Texas. Salary, then full partnership association. 120,000 population, 300,000 drawing area. Excellent hospital facilities. Ideal family living. Send curriculum vitae with reply please. Hermann Gregory, M.D., 1310 Ninth Street, Wichita Falls, Texas 76301. 817-322-6926.

RADIOLOGIST to associate with multi-specialty clinic, soon to be in new hospital with all new equipment; fringe benefits, good climate, good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

INTERNIST with subspecialty in either pulmonary disease or gastroenterology to associate with multi-specialty clinic, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

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TEXAS, SAN ANTONIO: EMERGENCY PHYSICIANS NEEDED for new group serving three hospitals; 65,000 ER visits a year. Fee-for-service. Departmental status. Past earning history $45,000 plus additional income for optional participation in employee health service. Write or call George Pruett, M.D., 5239 Round Table, San Antonio, Texas 78218. Telephone 512-653-3612.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic adjacent to 36 bed hospital recently remodeled. Salary open, partnership available after trial period. Contact Ad-503, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIANS: Private practice (solo, partnership, groups) opportunities exist in several communities within the state of Texas. (Arlington, Grand Prairie, Levelland, Pasadena, Victoria) As a public service to these communities, we are performing a free, no obligation, service acting as a liaison between physicians interested in practice opportunities and communities in need of their services. These communities have modern, JCAH approved hospitals, modern offices, and recognized needs for additional physicians. For details call collect 615-327-9551 or write with CV to: E. J. Ryan, Jr., Corporate Director, Medical Relations, Hospital Corporation of America, One Park Plaza, Nashville, Tennessee 37203.

GENERAL PRACTITIONER OR INTERNIST WANTED (Texas license required) for Student Health Physician. Annual salary with fringe benefits and pleasant association with three other physicians to care for students. Write Dr. Robert A. Lloyd, Director of Student Health Center, North Texas State University, Denton, Texas 76203, or call 788-2331. We are an equal opportunity employer.

TWO INTERNISTS NEEDED BY INTERNAL MEDICINE GROUP of seven internists and cardiologists. Consultation and referral practice. Houston environs. Prefer one general internist and one internist with major interest in cardiology. Salary open. Excellent opportunity and living area. Multiple maximum fringe benefits. Contact Robert Walsh, Business Manager, Doctors Clinic, 1501 Broadway, Galveston, Texas 77550.

MD, GP, OR FP URGENTLY NEEDED in Groesbeck, Texas to associate with two older MDs, one plans to retire shortly. Progressive county seat, town 2,500. Several industries, bank assets 13 million dollars, cattle and gas country. New 38 bed hospital, excellent consultant only 40 minutes from Waco, Texas. Adequate time off. Contact Groesbeck Clinic, P.O. Box 470, Groesbeck, Texas 76642.

UNIQUE CONCEPT: Two family MDs to start in June-July to work nine months rotating schedule, then off three months with salary. Gulf Coast, beaches, deep sea fishing, good attached hospital, salary open first year. Write, call, or come by: Medical Arts Clinic, 1711 West Wheeler, Aransas Pass, Texas 78336; AC512-758-5326.

ORTHOPEDIC SURGEON, BOARD CERTIFIED, NEEDED in 56-man multi-specialty clinic. Some practice experience preferred. Opportunity to head department. Eligible for partnership in two years. Medical school affiliation. Excellent beginning salary with fringe benefits. Adjacent to Texas Medical Center. Write or call W. D. Seybold, M.D., Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025. Telephone 713-526-2671.

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CARDIOLOGIST: North Dallas clinic. Board certified, $40,000; board qualified, $35,000. Profit sharing after first year; partnership possible in future. Please contact Ad-508, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

HOUSTON: Small corporate group with private emergency room seeking third family doctor without OB or major surgery. Salary $30,000 plus car, all fringe benefits: profit sharing, pension plans. On call every fourth night, every fifth weekend. New building; old location. William Giessel & Associates, 215 Milby, Houston, Texas 77003; 713-225-0463.

WE HAVE EXCELLENT OPPORTUNITY in area for GP who wants to do routine surgery, or surgeon who would supplement with FP. Well-established, fully-manned hospital in town. Other physicians would welcome one or two new men. Relaxed life style plus career opportunity for you and your family. More particulars from H. A. Raesener, Jr. (Administrator), Llano, Texas 78643; 915-247-5040.

NEED ONE OR TWO GENERAL INTERNISTS in a new facility with excellent office space. Non-affiliated group includes two neurosurgeons, two thoracic surgeons, one general surgeon, one orthopedist, three OB/GYN, three pediatricians, one cardiologist, one ophthalmologist, four psychiatrists, one ENT, two family practitioners, pathology and radiology. Keep your independence, but have a ready made practice. L. S. Nelson, M.D., 1901 Medi Park Place, Amarillo, Texas 79106. Phone 355-9473.

PHYSICIANS NEEDED. San Antonio State Hospital, a progressive 1,500 bed mental hospital, needs staff psychiatrists or other physicians interested in psychiatry. Excellent benefits. Salary $22,500 to $30,500 depending upon qualifications. Please call or write Dr. Frank Wilson, Box 23310, San Antonio, Texas 78223. Telephone 512-532-8811. Equal Opportunity Employer.

A POSITION IS OPEN in the Baylor Family Practice Center for a board certified family physician or internist to provide health services to the Baylor College of Medicine student group. A number of student families will receive medical care in the Family Practice Center. The assistance of a pediatrician is available to help care for younger children. The Family Practice Center is the hub of Baylor College of Medicine's residency training program in family practice. Family practice residents are available to assist with night and weekend call. Another full-time family physician is available to allow for vacation. There is opportunity to teach in this program. Physicians interested should write or call Dr. Marolyn Cowart, Director, Baylor Family Practice Center, St. Luke's Episcopal Hospital, 6720 Bertner, Houston, Texas 77025. AC 713 529-8779.

WANTED: INTERNIST WITH INTEREST IN CARDIOLOGY who desires to locate in rural area with leisure office hours and not particular about large earnings to associate with two AAFP physicians. Easy access to Houston, Austin, San Antonio and Texas Gulf Coast. Three ophthalmologists, one ENT physician in community. New hospital in planning stage. Salary to start, leading to partnership. Contact Ad-501, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEEDED: A PHYSICIAN FOR GENERAL PRACTICE in Giddings, Texas. Area population over 8,000. Only 55 miles from Austin. Medical clinic fully equipped with all modern equipment. Fully staffed. Need immediately due to illness of present owner. Call collect: 713-542-3144 or 713-542-2316.

WANTED: GENERAL PRACTITIONER OR INTERNIST on staff of San Angelo Center. This is an institution for the moderately mentally retarded of the state. Salaries are quite competitive with other state and federal institutions. 40 hour work week, ample vacation time, and other fringe benefits. Excellent community to live near San Angelo, Texas. Contact Medical Director, San Angelo Center, Carlsbad, Texas 76934.

GP NEEDED FOR SOLO PRACTICE. Near lakes and recreational facilities. 35 miles from Dallas. Financial assistance and large one-man clinic facility available. 60 bed nursing home adjacent to clinic. Expanding 36 bed hospital five miles away. Please reply to Ad-512, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

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ENNIS, ELLIS COUNTY: OPPORTUNITY for family practice, internist, or general surgeon in community of 12,000, serving a trade area of 20,000. Five physicians in town, one hospital, 55 beds, open staff. 35 miles from Dallas. No weekend E. R. call, covered by hospital based physicians. City of Ennis employing physicians on contract basis, office supplied, nurse supplied, billing provided, group hospitalization, paid vacation, etc. Contact Hayden Routh, City Manager, City Hall, Ennis, Texas; telephone 214-875-2675.

INTERNAL MEDICINE AND/OR OCCUPATIONAL HEALTH PHYSICIAN to practice and manage local outstanding University and Student Health Program and practice general internal medicine in 60-man outpatient clinic adjacent to Texas Medical Center. Excellent fringe benefits. Write or call, J. A. Bakken, Administrator, Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025; AC713 526-2671.

POSITION OPEN in the East Dallas Clinic for a physician desiring internal medicine, general practice or family practice with the exclusion of obstetrics. We have a partnership with two board certified surgeons and four physicians doing general practice, family practice or internal medicine. The clinic group was established at this location in 1947. It has an excellent patient population. Incoming new physician would start as full partner, and the initial investment would be only for furnishings he desires. Please contact: Walter H. Patton, M.D., L. A. Beyer, M.D., or Thomas B. Lee, Administrator, 6003 Victor Street, Dallas, Texas 75214; 214-824-4541.

PEDIATRICIAN TO JOIN three board certified pediatric group in professional association; liberal salary and fringe benefits; new pediatric center building to be completed in October is located next to teaching Children's Hospital; beautiful city by the sea, warm year round climate, population 250,000. For details write Box 3154, Corpus Christi, Texas 78404.

OBSTETRICIAN AND GYNECOLOGIST; 13-man multispecialty clinic wishes to add an obstetrician and gynecologist to reestablish this department in our clinic. We are seeking an individual under the age of 45, who is board certified and with at least five years of practice experience. Beginning guarantee of $40,000 per year plus bonus; moving expenses paid, part or full; all practice expenses paid; liberal time off; early partnership. Contact Donald F. Terry, M.D., The Medical and Surgical Clinic, 1518 10th Street, Wichita Falls, Texas 76301. Phone 817-723-1411.

PHYSICIANS: 715 bed hospital with active medical, surgical, psychiatric services, is in need of general internist, internist with training in pulmonary disease, hematologist-oncologist, urologist, and orthopedist, all preferably with certification. Excellent consultation, library and continuing medical education. Close affiliation with Scott and White Hospital with sharing of house staff. Probable site for medical school. Salary competitive, ample vacation and sick leave, and fringe benefits. Equal employment opportunity agency. Apply Chief of Staff, VA Center, Temple, Texas 76501.

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MODERN FURNISHED AND EQUIPPED CLINIC across from 43 bed acute care general hospital available for one or two physicians. Surgeon and FP combo ideal and urgently needed in community. Ideal financial arrangement for right parties. Contact Palacios Medical Foundation, P.O. Box 859, Palacios, Texas 77465, Attention: Mr. Morris.

SAN JACINTO METHODIST HOSPITAL, BAYTOWN, TEXAS. Physicians solo or group practice; family practice, orthopedics, psychiatry, pediatrics, anesthesiology, etc. Home of Exxon, U.S. Steel, major expansions underway. High income. On bay near Houston. Outstanding schools, colleges. Contact Administrator, 1101 Decker Drive, Baytown, Texas 77520; 713-427-0411, ext. 234.

GASTROENTEROLOGIST: Four man group needs fifth man with experience in radiology. Located in Texas and adjacent to hospital. Good practice already established. Good benefits and good educational facilities for both children and adults. Excellent salary and working conditions. Need immediately. Drs. Bailey, Douglas, & DeVaney Associates, 3434 Swiss Avenue, Suite 303, Dallas, Texas 75204.

WANTED: A PHYSICIAN FOR GENERAL PRACTICE in Poteet, Texas. Area population over 8,000; 20 miles south of San Antonio, Texas. Newly equipped $125,000 medical clinic available at very low rates. Equipped with x-ray; offices for two medical doctors; waiting room equipped. Contact A. Hollub, Poteet, Texas; Phone 626-2861.

Situations Wanted

BILINGUAL (SPANISH-ENGLISH) 29 years of age, single, female, board eligible, will complete 3rd year in OB/Gyn, July 1974 at University County Hospital. Experienced fetal monitoring, suction curettage, ultra sound, laparoscopy, colposcopy, high risk pregnancy. Seeking group practice with a composite of office, surgical, gynecology and clinical obstetrics. Please reply to Ad-492, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN, 36, board certified, two years of pediatric cardiology. At the present with US Army, would like to start practice in general pediatrics; interested in solo or associate. Desire relocation in San Antonio or Houston metropolitan areas; will consider other opportunities in East Texas. Bilingual Spanish. Available August 1974. Please reply to Ad-494, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST, certified, FACP, moving to ranch home near Marble Falls, September 1974. Needed: professional activity not requiring the opening of an office. Interests include writing. Please reply to Ad-509, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, Canadian graduate, board certified with wide experience. Wants permanent relocation in a stable community, preferably agricultural. Solo, partner, group or clinic. Desires busy practice, professionally rewarding. No general practice. City 15,000 or more. Willing to do some ER or industrial work, initially. Please reply Ad-502, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

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PHYSICIAN'S ASSISTANTS. August, 1974, Type A graduate of The University of Texas Health Science Center, Dallas, desire locations in Texas or Southwest region. Program accredited by American Medical Association, American Academy of Family Practitioners, and American Academy of Family Internists. For additional information contact Ron Driessner, 6844 Larmanda #153, Dallas, Texas 75231.

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						7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

21

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Advertising Directory

Abbott	31
Beverly Hills Hospital and Clinic	113
Blue Cross-Blue Shield of Texas	40-41
The Burdick Corporation	24
Burroughs Wellcome Company	62
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
The Diagnostic Clinic of San Antonio, P.A.	97
Dorsey Laboratories	45
El Paso Psychiatric Clinic	106
Ives Laboratories, Inc.	42
Mead Johnson Laboratories	11, 3rd Cover
Kelsey-Seybold Clinic	57
Lakeway Company	21
Eli Lilly and Company	46
The Martin X-Ray and Radium Clinic	106
McNeil Laboratories	29
Medical Arts Clinic of Corsicana	116
The Medical Protective Company	98
Medicenter Psychiatric Hospital	98
Memorial City Medical Center, Houston	129
National Resort Communities	101-102
The Pharmaceutical Manufacturers Association	34-35
Professional Lecture Series	107
The Prudential Insurance Company of America	9
Psychiatric Institute of Fort Worth	97
Radiology Associates of Fort Worth	116
Reed & Carnrick	18
Roche Laboratories	1-2, 16-17, 32-33, 68-69, 132-133
Roerig	24-25, 79-80
Scott and White Clinic	Back Cover
Seaview Hospital	58
Starlite Village Hospital	4
Texas Medical Association	
Automobile Leasing Program	117
Memorial Library Fund	110
Orient Adventure	67
Scandinavian Adventure	36
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	116
The Upjohn Company	114-115
Wallace Pharmaceuticals	58-59, 60-61
Warner/Chilcott	4-5
Wichita Falls Clinic-Hospital	4
Physicians' Directory	118-126
Classified Advertisements	127-129

Editorials

PSRO NOT POPULAR WITH MDs

The Texas Medical Association will undertake a campaign of patient education and publicity regarding the potential deleterious effect of PSRO legislation. Also, the Association will "exercise all possible courses of action to counter PSROs, including intensive efforts for repeal, amendment, deletion, or substitution of the entire PL 92-603 or Sections 207, 213, 219 and 249(f).

These were among the decisions made by the House of Delegates when it met in Houston May 11.

Professional Standards Review Organizations are designed to monitor medical services that are paid for under provisions of the Social Security Act. Physicians, of course, have long supported peer review and by 1972 nearly three-fourths of all county medical societies in the nation had peer review programs. Nevertheless, most physicians are wary of letting a government bureau set forth rules and regulations under which they are to provide peer review, especially when that service already is being provided locally without much red tape.

One of the objections to PSRO is that the additional cost of bureaucratic handling ultimately would increase the taxpayer's bill for "medical" expenses. Another is that the PSRO would set up "norms of care, diagnosis and treatment" as a basis for review of services. Physicians counter that disease does not always follow normal patterns, nor can individual patients readily be pigeonholed into "normal" categories for care and treatment.

Yet another cause for concern is that PSRO calls for maintenance and review of profiles of both patients and providers of care. These profiles would be coded and put into computers, but still a measure of privacy would be lost. As the American public is learning somewhat painfully, there is nothing private about government files anyway.

For these and other reasons, many physicians are convinced that PSRO in its present form will generate more harm than good, and the TMA and other medical organizations have chosen to try to bring about constructive changes in the law.

David S. Dow, MD, Waco.

RUBELLA VACCINE IN PREGNANCY

The guidelines distributed by the Texas State Department of Health's Immunization Division clearly indicate that rubella vaccine (alone or in combination with rubeola vaccine) should not be given routinely after the 12th birthday. The reason for this policy is the possible risk of fetal damage from the vaccine virus.

While it is true that there are as yet no reported cases of the congenital rubella syndrome associated with vaccination, vaccine virus has been found in placental and fetal tissues from women who have been immunized inadvertently just before or soon after conception, and subsequently had spontaneous or therapeutic abortions. A recent report has indicated that histopathologic changes in a fetal eye infected with rubella vaccine virus were similar to those associated with the congenital rubella syndrome.

Because of this potential risk to the fetus of a mother immunized in the first trimester of pregnancy or just before conception, the following guidelines are suggested for the management of this problem in women of childbearing age (12-50 years):

1. Prior to vaccination, the woman should be tested for rubella antibodies by the hemagglutination-inhibition (HI) method. A history of rubella is not reliable. Serosusceptibility should be the sole criterion in determining whether or not vaccine is necessary.

2. If serosusceptibility is demonstrated, the woman should be given vaccine only if she is

shown not to be pregnant (during or immediately following menstruation, for example.)

3. Those women vaccinated should be maintained on a reliable contraceptive program for three months.

If these guidelines are not carefully followed, significant numbers of women will inadvertently be vaccinated during the early stages of pregnancy. When this occurs, considerable anxiety often results,therapeutic abortions are frequently performed with their associated complications and expense, and fetal wastage is increased.

The serologic test for rubella antibodies is available at most commercial laboratories and at the Texas State Department of Health. The performance of this test as part of the premarital examination, in conjunction with the VDRL, is recommended by the health department.

Carl Muchnick, MD, Austin

Reference

1. Wyll SA, Herrman KL: Inadvertent rubella vaccination of pregnant women. JAMA 225:1472-1476, 1973.

A WARNING!

The scabies mite has breached the Rio Grande and is to be expected in the Texas hinterlands soon, if it is not already there!

It is imperative that scabies be moved into the upper echelons of the indices of suspicion of the general practitioners, internists, and dermatologists of Texas!

I am a dermatologist on the frontier, and in the past six to ten months the numbers of scabies cases in the Rio Grande Valley ecological funnel have multiplied dramatically. For the past five years many cases have come from the upper economic levels of Mexican border cities. Social and commercial intercourse has finally allowed the epidemic to come onto the Texas side of the river—*en masse*!

In the two weeks previous to the writing of this notation, 32 cases were seen and diagnosed. This expanded to 143 people treated in the household contact groups. Many of these latter were definite known cases. These cases ranged in geographic source from Brownsville to Roma and north to Falfurrias. In the recent past cases have been seen from as far south as Ciudad Victoria in Mexico and Dallas to the north. To quote a local general practitioner, "I've been seeing so many cases of scabies, I don't believe it!"

As the people leave the Valley in the next few months, in the migrant worker and winter visitor streams, cases are bound to fan out to the rest of Texas and mid-western and western states.

Interestingly, the veterinarians have also noted an explosion of scabies cases in small animals. This also can affect people, although the disease is self-limited to a few weeks.

The resurgence of scabies in the past few years in most of the world was noted in an article in the *Journal of the American Medical Association* in August 1971. It was predicted that the US would participate in this—as previously had been predicted in the *Archives of Dermatology* in 1966.

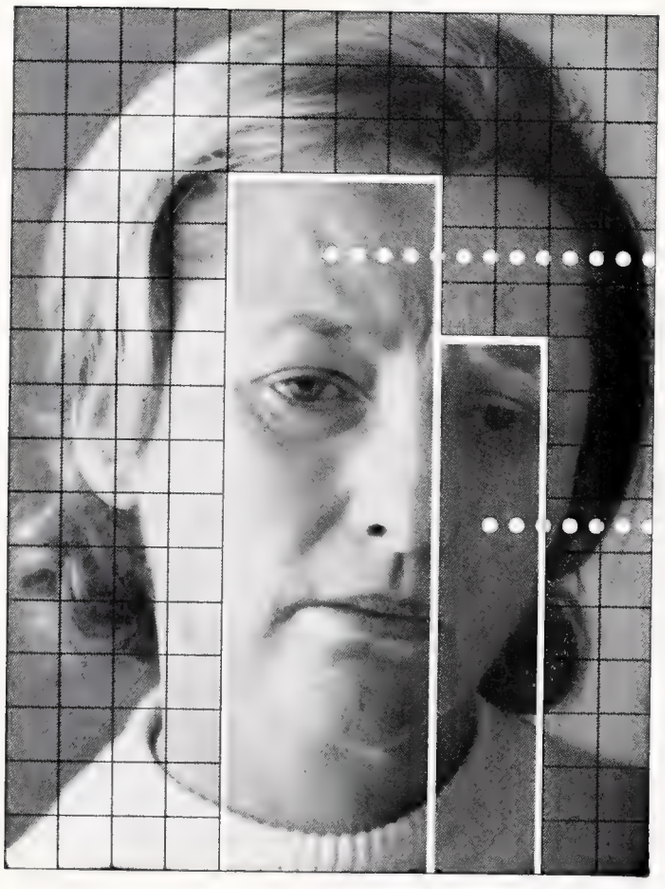
Therapy for scabies is relatively simple, but must be painstaking. Kwell and Eurax are readily available commercial preparations of 1% benzene hexachloride and crotamiton. Household, personal, and inanimate contacts must be treated to eliminate the stubborn infestation. A word to the wise!

Ivan W. Kuhl, MD, McAllen

References

1. Orkin M: Resurgence of scabies. JAMA 217:593-597, 1971.
2. Hellier FF: Incidence of scabies. Arch Derm 9:634, 1966.

Both often



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Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequer and/or severity of grand mal seizures m require increased dosage of standard ar convulsant medication; abrupt withdraw may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous in gestion of alcohol and other CNS depres sants. Withdrawal symptoms (similar to those with barbiturates and alcohol) hav occurred following abrupt discontinuanc (convulsions, tremor, abdominal and mu cle cramps, vomiting and sweating). Kee addiction-prone individuals under carefu

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Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.

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House votes to fight PSRO

On May 12, 1974, an impressive memorial service brought to a close the largest and most successful annual session in the long history of the Texas Medical Association. The program was replete with a variety of educational opportunities to satisfy the needs of everyone. Scientific and technical exhibits were abundant, and of the highest quality. All of the Association's committees and councils performed tremendous amounts of work. Reference committees functioned efficiently on Friday, and one of them continued its deliberations until 1:30 am, and staff personnel worked until 6 am typing and printing reports.

The House of Delegates began its session early Saturday morning, and a variety of important issues were on the agenda. Since the great preponderance of problems confronting the medical profession today concerns socioeconomic and political concerns, the House focused its attention on these matters. Much of the delegates' time was taken up by PSRO, HMO, NHI, and relicensure of physicians. Certainly PSRO was the major consideration.

Information was presented to indicate that TMA had, in good faith, attempted to accomodate itself to the provisions of PL 92-603 dealing with this controversial subject. HEW has completely ignored our considerable efforts in this endeavor. In fact, Sen Wallace F. Bennett (R-Utah), in a confrontation with AMA President Russell Roth, MD, made it clear that he intends to circumvent organized medicine and take his fight to the practicing physicians. If the attitude of the Texas Medical Association's House of Delegates is any indication, Senator Bennett is in for a surprise! The practicing physicians of Texas voted overwhelmingly to voice their opposition to the present form of PSRO by filing a suit against HEW, by continuing to work in the halls of Congress, and to mount an extensive campaign to acquaint the public with the real dangers inherent in the present PSRO legislation. In order to accomplish this ambitious but necessary goal, the House recognized that significant financial implications were involved. With a reassuring display of determined unity, delegates voted an assessment of $100 for each active member. This action, together with other policy decisions, clearly demonstrated a determination on the part of Texas physicians to present a united front in the continuing struggle to preserve an atmosphere of freedom essential to the delivery of high quality medical care to the people of Texas.

Numerous outside influences are exerting powerful efforts to divide and fragment the medical profession. We must all be aware of the importance of emphasizing those positive factors which bind us together, and of submerging the minor differences which push us apart.

Ed W. Schmidt, M.D.

Ed W. Schmidt, MD, President, Texas Medical Association.

May 74

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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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Contents

SCIENTIFIC ARTICLES

47 Post-exposure rabies prophylaxis with emphasis on 1972 recommendations of the PHS Advisory Committee on Immunization Practices
Dr. S. J. Lerro

58 Practical application of urologic diagnostic techniques
Dr. Howard M. Radwin

70 Changing concepts in treatment of ruptured omphalocele (gastrochisis)
Dr. Leonard Graivier

77 Prenatal diagnosis in the prevention of genetic disease
Dr. R. Rodney Howell;
Dr. Charleen M. Moore

89 Early treatment of blunt chest trauma
Dr. B. J. Jarem;
Dr. John A. Jenicek

EDITORIALS

138 TMA-AMA urge restraint in raising fees for service

138 AMA, AHA travel together
Horace M. Cardwell

142 Communication, legislation, education can solve medicine's foremost problems
Dr. E. W. Schmidt

FEATURES

97 Dr. Ed W. Schmidt—new TMA president

100 The joy of creativity through an artist's brush
Dr. Norma Porres

NEWS

6 TMA activities

8 Tech's commencement

10 Congress tables controls

10 Health department's administrative residency

13 Abortion research

14 TMF booklet

14 Women fear breast cancer

18 AMA-ERF grants

19 National blood commission

19 Hill-Burton allocations

19 Immunization information

22 Medical advances in 1973

22 Texas Medicine notice

DEPARTMENTS

23 Capital Comments

26 Information for Authors

38 Coming Meetings

43 Continuing Education

104 Legal Protection: Facts You Should Know

105 Medicine and the Law

107 Medical Newsmakers

108 Medicine in Literature

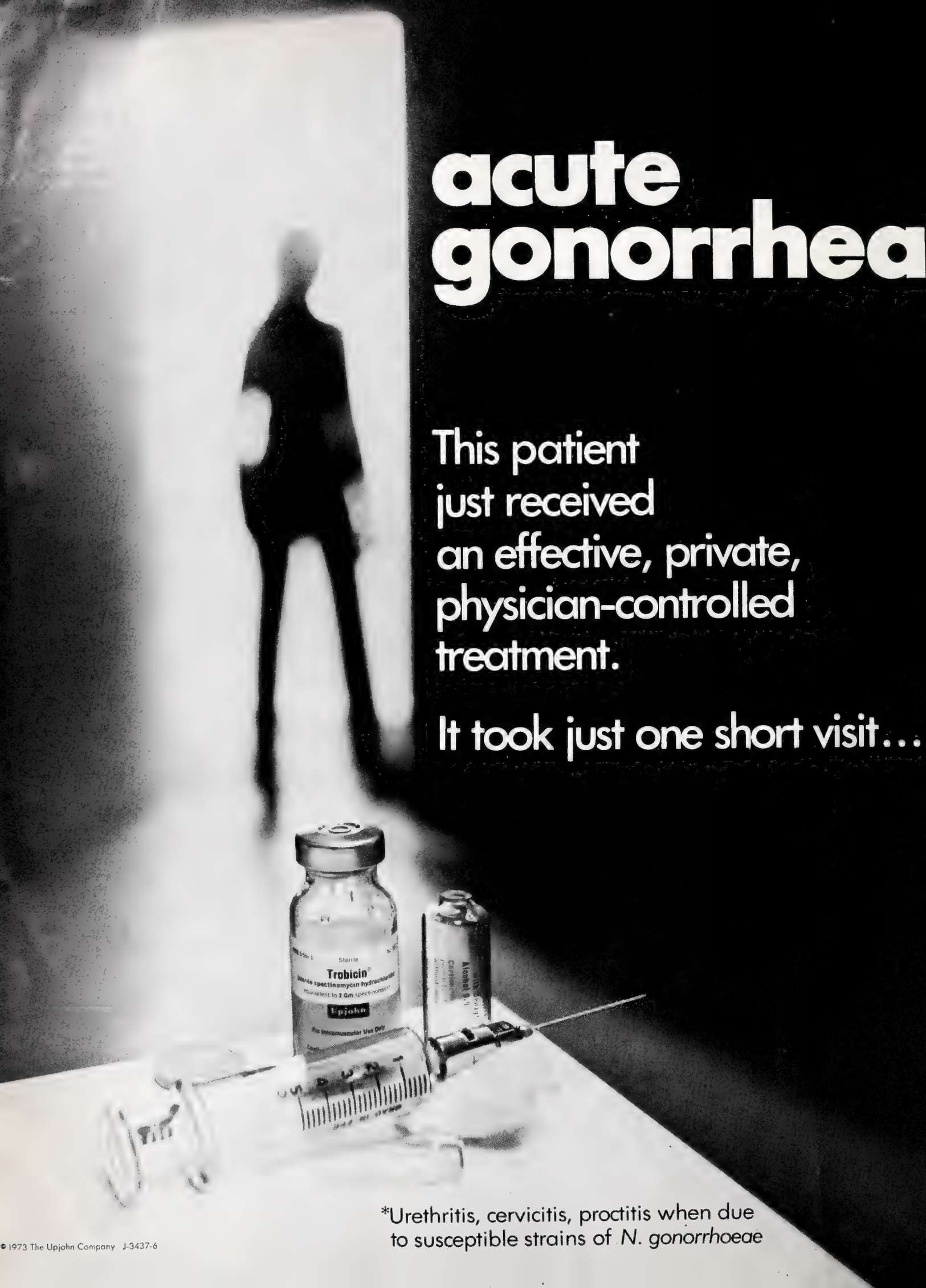
111 Recent Deaths

ON THE COVER

Whenever a patient seeks treatment for an animal bite, the physician must decide whether or not rabies prophylaxis is indicated. The article beginning on page 47 provides the latest information on rabies vaccine and antirabies serum, and offers practical information for physicians who may have to treat animal bites.

NEXT MONTH

Articles scheduled for June will be on the pediatrician's role in preventing heart disease; slow ventricular tachycardia; regional flaps in head and neck surgery; and metabolic and nutritional evaluation of burn neutrophil function. Also, the June issue will bring you a complete report on the 1974 annual session and actions of the TMA House of Delegates.



*Urethritis, cervicitis, proctitis when due to susceptible strains of *N. gonorrhoeae*

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Indications: Acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

Contraindications: Contraindicated in patients previously found hypersensitive to spectinomycin.

Warnings: Not indicated for the treatment of syphilis. Antibiotics used to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Patients should be carefully examined and monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected.
Safety for use in infants, children and pregnant women has not been established.

Precautions: The usual precautions should be observed with atopic individuals.
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Adverse reactions: The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.
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NEWS

TMA activities expand in scope during first months of 1974

During the first several months of 1974, the Texas Medical Association has been engaged in providing more services and more representation for Texas physicians. Additionally, the Association has experienced increased utilization of services by physicians. The following is a summary of some of the activities in which TMA has been involved since the outstart of the year.

Memberships which were received during the first three months of the year totaled 8,994, a significant increase over the same period in 1973. TMA developed procedures for faster processing of dues in order that the county societies realize full benefit from the American Medical Association's incentive program.

TMA is now providing administrative service to a tenth specialty society in the state, the Texas Dermatological Society. TMA is one of 18 state medical associations which are rendering service to specialty societies.

Programs designed to provide effective spokesmen for medicine are continuing to be offered by TMA. The most recent TMA-AMA Speakers and Leadership Training Seminar, presented in Austin during March, was attended by various officers of county medical societies, members of TMA councils and committees, Auxiliary representatives, and others. During the past 18 months, 120 participants have attended these seminars.

New services

An Association first, the Conference of County Medical Society Executives, was hosted by TMA in Austin in March. The conference was designed to provide a forum for the exchange of ideas and discussion of administrative problems of common interest. Topics included membership, dues processing, services, meeting preparation, committee organization and operation, communications, the public, the news media, TMA and AMA policies, and others.

Also this spring, TMA hosted Conferences on Medical Practice for graduating seniors at the state's medical schools. These conferences are designed to present practical information to assist the graduates in the transition into intern and resident training and medical practice.

A practice management workshop, "Establishing Yourself in Medical

Practice," was offered jointly by the TMA and AMA in Houston in April. The program included a presentation prepared by representatives of Conomikes Associates, Inc, on personnel problems, patient flow techniques, physical aspects of the medical office, paperwork, and practice setting. In addition, the program was complemented by a talk on legal aspects of medicine by Mr. Ace Pickens, TMA assistant general counsel.

It has been reported that more than 1,000 now are participating in TMA's Keogh retirement plan. It is anticipated that participation in the plan will increase if pending federal legislation is enacted permitting the self-employed to invest 15% of income or a maximum of $7,500 annually in tax-sheltered pension programs.

Increased communications

The Association is continuing to step up communications to members. Five newsletters have been published since the first of the year. The various newsletters being implemented to keep physicians abreast of activities include *TMA Action*, *TMA Legislative Bulletin*, *TIMA Newsletter*, and *TMA Bulletin*.

The Memorial Library has experienced an increase in the number of reference requests during the first three months of 1974. Reference requests numbered 3,802 during this period, an increase of 45% over the same period in 1973. The Library is continuing to increase its services to members.

In another area of TMA activity, 40 loans totaling $20,500 were awarded to medical students in the state during the first quarter of 1974 by the Board of Trustees. These included 38 loans amounting to $19,500 granted through the Dr. S. E. Thompson Fund and two made through the Dr. May Owen Trust. Ten additional loans totaling $5,000 were pending at the close of the quarter.

Legislative information

More than 140 different informational items, primarily relating to recently enacted legislation and regulations, have been distributed by the Office of Government Health Programs since the first of the year to officials of TMA and county medical societies. The Office also has

NEWS

abstracted and analyzed some of the major public laws, such as the Health Maintenance Act of 1973, for physicians.

Physician complaints received against government-financed health care programs and fiscal intermediaries, as well as against private insurance companies, are referred to the personal attention of the executive staff and/or the Office of Government Health Programs. Resolutions to the problems are actively sought and, in some instances, it is possible to resolve problems simply through direct correspondence with physicians and the intermediaries.

TMF activities

The Texas Medical Foundation has consummated three contracts in the amount of $459,000.

The Quality Assessment Program for the State Department of Mental Health and Mental Retardation is underway. Criteria have been established and a physicians' advisory committee has been appointed. In addition, a lay supervisor and a senior nurse coordinator have been employed for the project.

In another ongoing project of the Foundation, hospitals have agreed to participate and criteria have been developed for the Small Hospital Quality Assessment program.

The Texas Medical Foundation has published and circulated the *Symptom Diagnoses, Findings Diagnoses, ICDA-8* to all members of the Texas Medical Association. (See related story, p 14)

Final negotiations and drafting of a sub-contract are in the process with Group Health Services, Inc, and the State Department of Public Welfare for the Texas Admissions and Review Program (TARP). This program will provide quality assessment and a concurrent review for Medicaid.

The Foundation is also working with COMPAS, Inc, San Antonio, in testing the physicians' office support program. Results of the test are expected this month. Other projects are currently being discussed and considered by the Foundation.

Tech conducts first commencement

Texas Tech University School of Medicine conducted its first commencement ceremonies March 31 conferring MD degrees on 24 graduates.

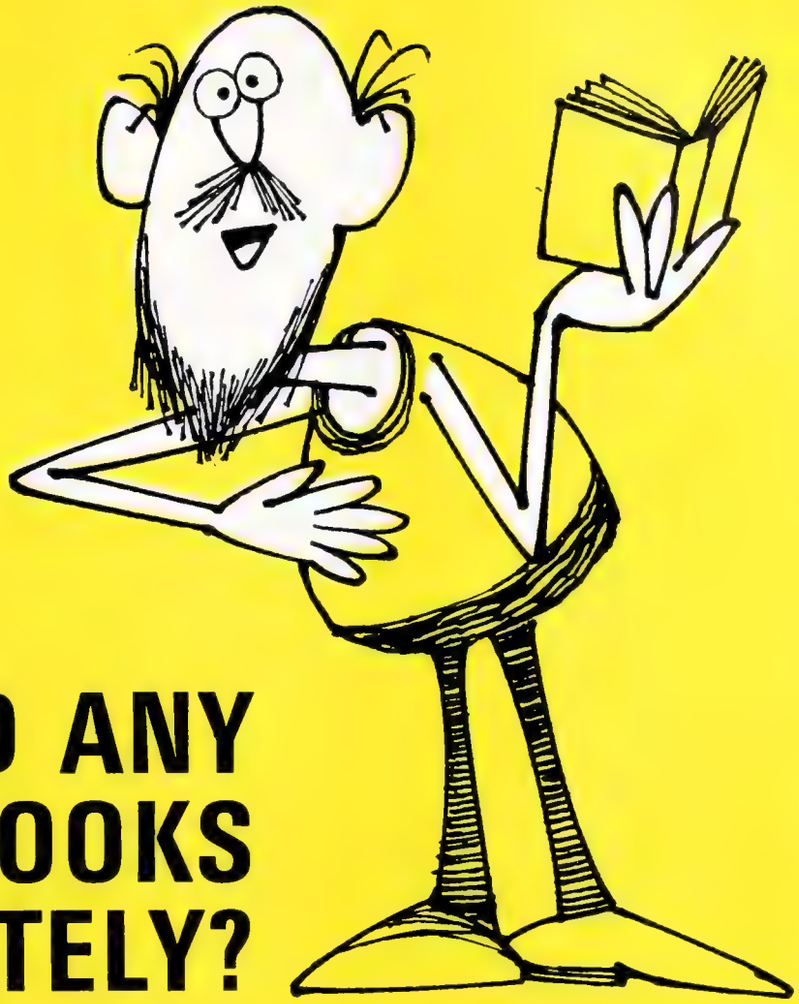
Dr. A. D. Cooper, president of the Association of American Medical Colleges, was guest speaker for the event in the Ballroom of the Texas Tech University Center.

In a special ceremony preceding the first commencement, awards were presented to nine of the graduates for outstanding achievement during their academic careers. Dr. William W. Frye also congratulated each graduate for successfully passing the clinical portion of the National Board Examination.

Those graduated were among the first students to enroll in the medical school when it opened its doors in August 1972. In addition to the junior transfer students composing the class of '74, there were 36 freshmen enrolled that first year. Today the school boasts an enrollment of 104. Faculty has increased in the two years from 120 members to 340 including 130 full time staff.

Because of their initial transfer status, the graduating class represents a wide variety of geographical, personal, and educational backgrounds and interests. During their training at Tech, some were involved in such activities ranging from rural preceptorships to elective studies in Europe. Their plans for further study or practice are as diverse as the class itself. Some are planning to enter practice directly while others have been accepted for internships and residencies across the nation.

Of the graduates, 13 are entering rotating internships, three within Texas. Three are assigned to family prac-



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tice internships or residencies, two of which are with Texas Tech. Other specialty interests represented include surgery, nephrology, psychiatry, neurosurgery, pathology, and oral maxillo-facial specialty.

In his commencement address Dr. Cooper emphasized that health is the responsibility of both the providers of health care and the people they serve. He discussed the importance of educating the public stating that public health education has been neglected and fragmented. Dr. Cooper also stressed the need for a mechanism to provide better distribution of health resources, and he touched on several other problems facing medicine today.

Drs. Sydney A. Garrett, Robert Salem, and Robert Gulde were recognized as outstanding faculty by the class.

Congress tables economic controls

The Senate Banking, Housing, and Urban Affairs Committee has tabled proposals which would have extended the Economic Stabilization Program.

The Committee voted 11 to 4 against a compromise plan that would have given the Administration standby authority to keep controls on some industries after the April 30 cut-off when the controls program expired.

Sen John Tower (R-Tex), a member of the Banking Committee, said most Committee senators believed that it is "time to let the marketplace be allowed to work." House Banking and Currency Committee Chairman Wright Patman (D-Tex) previously had predicted his panel would not move to continue controls.

Dr. N. L. Barker, Paris, and Dr. Max Morales, Jr., San Antonio, representing the physicians of Texas, personally contacted Congressmen Patman and Henry B. Gonzalez, also a member of the House Committee, expressing physician opposition to the extension of the controls. Letters of opposition were also written to the two representatives by TMA president, Dr. Charles B. Dryden.

The Senate has voted 56-32 to table an amendment which would have given the Administration standby authority to impose controls on selective sectors of the economy if they exhibit signs of high inflation.

TMA and AMA have urged physicians to use self-restraint and to increase fees only as necessary to keep pace with inflation.

Health department initiates administrative residency

A one year residency training program in health care administration, the first of its kind in the nation, has been developed by the Texas State Department of Health.

The pilot educational program was proposed by Walter L. Dick, chief of staff services for the Medical Care Administration Division of the health department. The program has been initially funded for two positions by the Bureau of Health Insurance, Social Security Administration, US Department of Health, Education and Welfare.

The first resident, Brian Riddle, began training Jan 1 under the direct preceptorship of Dick. He is scheduled to receive a master of science degree in health care administration from Trinity University in December.

Included in the residency program is the study of the various components of the health department, particularly the Medicare Division, the Dallas Regional Office of DHEW, and health related professional organizations such as the Texas Medical Association, Texas Hospital Association, Texas Nursing Home Association, and others. In addition, the resident will be schooled in the basic functions of the Social Security Administration's central office in Baltimore and other programs and organizations which

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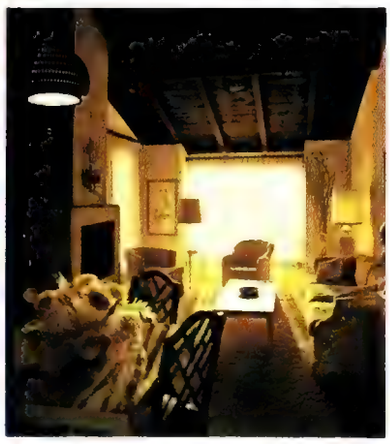

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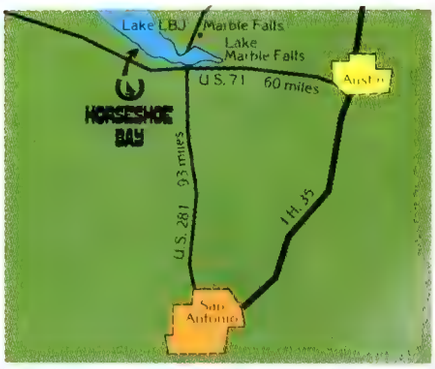

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interface with Medicare program activities.

According to Dick, there are 32 graduate schools across the country offering degrees in hospital administration. The new program is designed to provide a broader view of the health care system and an in-depth knowledge of the relationships existing between the private sector of health care delivery and the governmental agencies influencing their operations. Dick anticipates that the second position will be filled this fall or by the end of the year. By staggering the residents' training, improvements and modifications may be made in the program as experience is gained and feedback is received. He said that the Social Security Administration has indicated an interest in the continuance of funding for the program.

Researchers to study abortion in Texas

Faculty of The University of Texas Health Science Center at Houston, School of Public Health, in consultation with the Texas Association of Obstetricians and Gynecologists and the Southwest Regional Executive Director's Council of Planned Parenthood are engaged in a pilot research study which will investigate the medical consequences as well as the patterns of abortion utilization in Texas.

The study was undertaken to provide information related to maternal health and other public health measures which may be affected by the availability of induced abortion brought about by the Supreme Court decision of 1973 which legalized abortion in the United States.

Dr. Lewis H. Roht, assistant professor of epidemiology and population studies at the School of Public Health, will be principal investigator for this study. Dr. Roht and the study's research assistant, Ruth Nelson, are currently working in cooperation with the Texas Association of Obstetricians and Gynecologists, Planned Parenthood clinics and other agencies throughout the state, in the development of this pilot study.

According to Dr. Roht, Texas, which currently numbers the third largest state population of women in the reproductive ages, is likely to augment that number due to the concentration of excellent health care facilities in the state.

The researcher said, "These facilities may serve to attract residents from other states who are seeking abortion services, which may not be available to them in their home states. Unlike the two most populous states of California and New York, Texas does not currently have any official mechanism for collecting abortion related information. The pilot study will collect important information in this regard; and will thereby assist hospitals, clinics and physicians involved in fertility control services."

The study has been endorsed by the Texas Association of Obstetricians and Gynecologists and by the Southwest Region Executive Director's Council of Planned Parenthood.

Data collection for the study will occur through a statewide voluntary reporting system of induced abortions, encompassing hospitals, clinics, and physicians who offer legal abortions. In return for their cooperation, participating facilities and physicians will receive quarterly summaries of their individual or institutional experience, and a year-end report describing the statewide experience. This report will be concerned with the clinical findings and will examine the impact of legal abortion on the birth rate, maternal and infant mortality and morbidity, and illegitimacy in Texas. Data will be collected on a monthly basis during 1974 and through Dec 31, 1975.

"Anonymity of doctors and patients will be respected at all times," Dr. Roht emphasized. "We are not inter-

NEWS

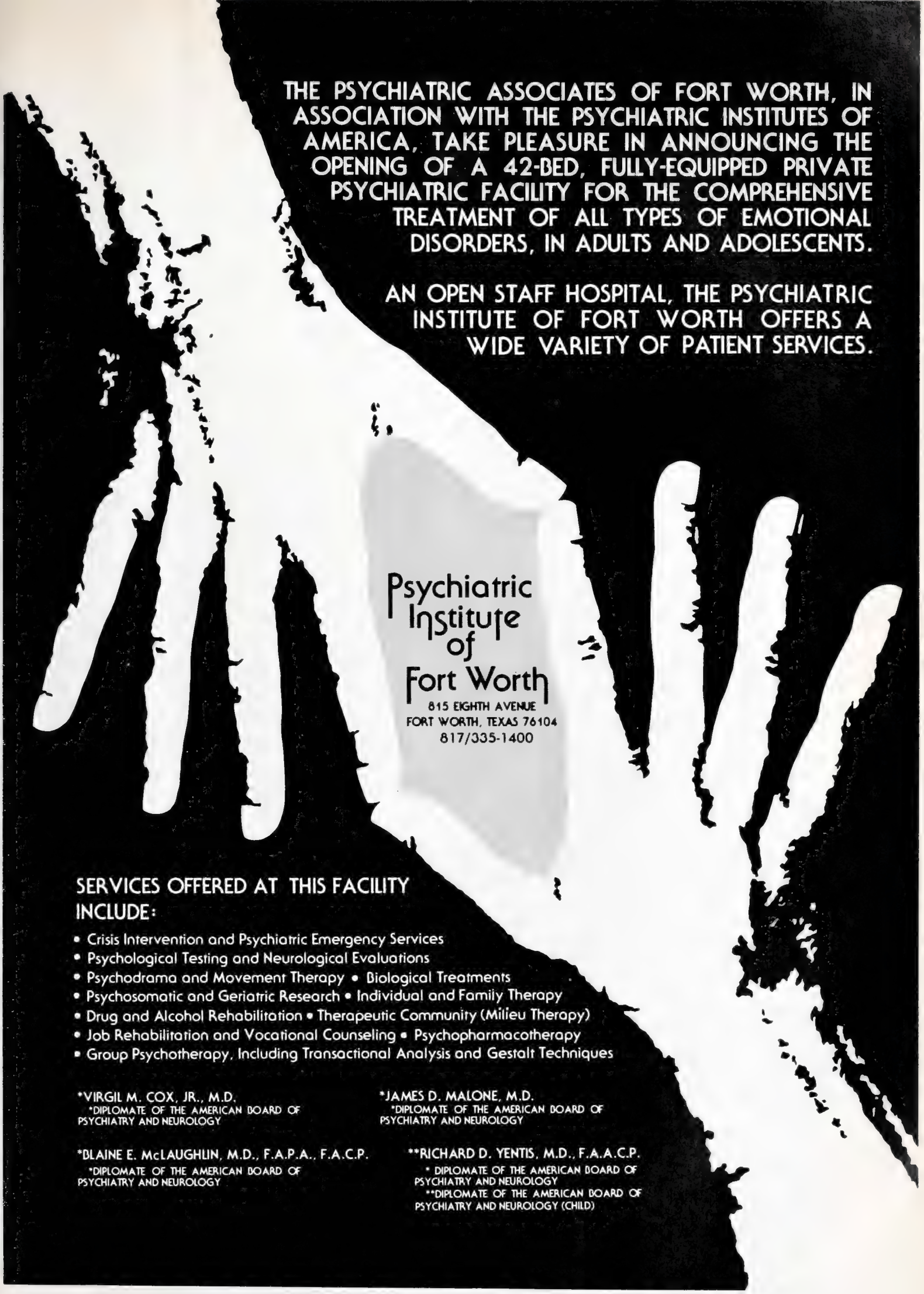
ested in the names of individual patients or physicians and will not seek this information from the participating institutions or facilities." He added, "Because of the widespread use of abortion and its important implications in the practice of obstetrics, gynecology, and in the area of public health, we strongly hope that all physicians, hospitals, and clinics will cooperate with us in this study."
Physicians interested in participating in this study or who would like further information, may write or contact Dr. Lewis H. Roht, The University of Texas Health Science Center at Houston, School of Public Health, P O Box 20186, Astrodome Station, Houston 77025. Telephone number is (713) 792-4422.

Texas Medical Foundation publishes code booklet

The Texas Medical Foundation has distributed to member physicians copies of its new booklet, *Symptom Diagnoses, Findings Diagnoses, ICDA-8,* for use in dealing with medical records and third-party claims forms.
The pamphlet is an abstracted list of the symptoms and findings diagnoses in the volume *International Classification of Diseases Adapted, 8th Edition.*
The booklet was prepared by the Texas Medical Foundation and publication costs were paid by a contract granted by the Regional Medical Program of Texas.
In a letter accompanying the booklet to physicians, Dr. Joseph T. Painter, TMF president, stated that third party record keeping and payment is based upon codes used to computerize information received from the doctor's claims forms. If the doctor does not use Current Procedural Terminology (CPT) to identify medical procedures performed, and ICDA coding for symptoms and findings diagnoses identified, then the third party will apply the codes itself.
Dr. Painter said the booklet was designed as a timesaver to physicians and their staffs in selecting the appropriate code to reflect diagnoses most frequently reached by physicians. There will still be occasions when reference to the *ICDA-8* volume is necessary.
Physicians who do not have a copy of *ICDA-8* in their offices may purchase a copy from the Superintendent of Documents, US Government Printing Office, Washington, D.C. 20402. Refer to Public Health Service Publication #1693. Cost is $3.25 per copy.

Women shown to fear breast cancer, surgery

Results of a national survey conducted for the American Cancer Society (ACS) by the Gallup Organization, Inc., on women's attitudes regarding breast cancer have been released.
The study was proposed by the ACS Public Information Committee in February 1973. A national sample of 1,007 women 18 years and older were personally interviewed, with interviews averaging one hour in length.
A summary report of the in-depth survey presents statistics in the following areas: 1) how women think about breast cancer, 2) medical care habits and breast examinations, 3) the practice of breast self-examination, 4) role of the physician, 5) attitudes regarding breast surgery, and 6) reactions to breast removal.
The survey indicated that "breast cancer is so much a major medical concern of American women that most grossly over-estimate its prevalence." When asked to identify the two or three most serious medical problems facing women, 43% named cancer first, another 13% referred specifically to breast cancer, and 6% cited uterine or cervical cancer. Misconceptions were found to exist in the women's knowledge of the frequency of cancer although a majority did express some optimism regarding



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Hypertension. It is no

a badge of achievement.

Some people think of hypertension as the successful executive's disease. A kind of badge of achievement.

They associate it with two telephones in each hand, lines of junior personnel awaiting instructions, overlapping meetings that begin early and last late, stern expressions and firm decisions.

Forget it.

Hypertension hits anybody. The young. The poor. The old. The rich. People who worry and people who don't. Placid plodders and ambitious advancers.

As hypertension progresses untreated and uncontrolled, it damages the body. Strokes and heart attacks become more likely. Kidney damage may occur. And by the time the symptoms become undeniable, much irreversible harm may have been done.

In the beginning, it is quite possible that a person may suffer from hypertension and be completely unaware of it. Then why worry? Because hypertension may get worse. If you detect it now, it can probably be controlled before it does any damage to you.

But if you wait until you notice the symptoms, it may be too late; serious harm may already have been done.

How can you tell if you're hypertensive.

You can't.

Your doctor can. Immediately.

And the odds are overwhelmingly in your favor if you're a victim and find out early. Current statistics indicate that every year, there is a lower incidence of death from hypertension precisely because hypertensives are being treated properly. And in time.

Because we think of ourselves as People Helping People, we'd prefer to see you get that treatment early rather than too late.

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therapy.

Of the women interviewed, half do not have annual breast examinations by a physician. In addition, while 77% of the women had heard of breast self-examination, three out of every ten of this percentage have never practiced it. The report listed three factors accounting for the failure of women to practice breast self-examination: 1) ignorance of the importance of frequent breast examinations, 2) fear and anxiety, 3) lack of knowledge about breast self-examination and confidence in how to do it.

The survey found that physicians play the single most important role in getting women to practice breast self-examination but still called the doctor's role as "quite limited in terms of what it could be." Statistics indicated that physicians are particularly effective in translating mere awareness of breast self-examination into actual practice. However, only 23% of the women reported having a physician who examines their breasts at every visit. Even among women who see a gynecologist for check-ups, 43% said there is at least one physician they see who examines their breasts every time they see him.

The summary stated that most women are not aware of the extent to which extensive breast surgery is used in the treatment of breast cancer. They expressed strong and conflicting fears and anxiety about mastectomy relating to worry about cancer on one hand and to the disfigurement of breast removal on the other.

Forty-seven percent of the women said they would prefer signing consent forms prior to exploratory surgery. The chief motivations of women favoring prior consent are fear of surgery and cancer, and confidence in their physician.

The women were divided rather evenly as to which would be more disturbing emotionally between the removal of the entire breast as a precautionary measure (48%) or removal of the cancerous lump in hopes that spread has not occurred (42%). The survey indicated, however, that the strong aversion of women to breast loss could not by itself account for all the fears in women's attitudes regarding breast surgery and that the fear of cancer appeared to be the more important factor. The report inferred that increasing the confidence of women in survival chances after breast removal would contribute significantly in acceptance of extensive surgery. In addition, the report concluded that a realization of the extent to which early detection increases survival rates could also reduce the inhibiting effect of worry upon the desire for frequent breast examination.

Grants totaling $47,000 presented to med schools

Texas medical schools have received $47,488.35 in grants from the American Medical Association Education and Research Foundation (AMA-ERF).

Funds for each school include: The University of Texas Medical School at San Antonio, $21,029.42; The University of Texas Medical Branch, $6,328.15; The University of Texas Southwestern Medical School at Dallas, $8,341.80; The University of Texas Medical School at Houston, $2,352.80; Baylor College of Medicine, $6,039.13; and Texas Tech University School of Medicine, $3,397.05. The checks to The University of Texas System schools were presented at recent TMA Conferences on Medical Practice.

AMA-ERF is a national program which accepts memorials and other contributions from individuals who designate which medical school is to receive the gift.

The Texas total was part of $1,265,000 in unrestricted grants presented to the nation's 114 medical schools. This sum is the largest amount distributed in ten years and the fifth largest since the AMA began its aid to education program 23 years ago.

National blood commission to be established

A proposal has been announced for the establishment of a blood commission that would assure a national, all-volunteer supply of blood for transfusions and medical emergencies by Dec 31, 1975.

Major sponsors of the proposed American Blood Commission include the American Medical Association, the American National Red Cross, the American Association of Blood Banks, and the Council of Community Blood Centers.

The plan is for a volunteer program controlled at the local level, with medical societies playing a major role. Some 150 national groups with an interest in a safe blood supply would be members of a commission that would oversee each regional program. The regional programs in turn would guide the activities of blood banks and transfusion facilities in their own area.

The proposed plan has been published in the *Federal Register* in order to give interested groups time to comment.

Hill-Burton allocations approved by state board

The Texas State Board of Health took action on 60 Hill-Burton loan and grant allocations at their regular quarterly meeting in March.

Actions were taken in the categories of hospitals and public health centers, outpatient facilities, modernization, long term care, rehabilitation-outpatient, and rehabilitation-inpatient.

The following are some of the Board's actions selected at random. Projects under the hospitals and public health centers category: Sunnyside Neighborhood Center, Houston, $120,000(G); McKenna Memorial Hospital, New Braunfels, $643,522(G), $514,800(L); Scott and White Memorial Hospital, Temple, $1,000,000(G), $800,000(L).

Projects planned by outpatient facilities: Corpus Christi Public Health Center, Corpus Christi, $800,000(G); Bexar County Hospital District, San Antonio, $1,000,000(G); Navarro County Memorial Hospital, Corsicana, $122,000.

Modernization projects: Titus County Memorial Hospital, Mount Pleasant, $1,000,000(G), $1,000,000(L); Brackenridge Hospital, Austin, $1,000,000(G); Hotel Dieu Hospital, El Paso, $500,000(G).

Long term care projects: Jewish Home for the Aged, Houston, $1,000,000(G), $2,500,000(L); Presbyterian Hospital, Dallas, $340,000(G), $5,000,000(L).

Projects under the category rehabilitation-outpatient: Easter Seal Treatment Center, San Antonio, $690,754(G); Easter Seal Treatment Center, Fort Worth, $369,087(G).

Projects under rehabilitation-inpatient: St. Mary of the Plains Hospital, Lubbock, $701,211(G), $628,000(L).

TMA committee distributes immunization information

The Texas Medical Association Committee on Public Health, in cooperation with the Texas State Department of Health, has sent current information on smallpox vaccine, DPT immunization, and rabies prophylaxis to Texas hospital administrators and county medical societies.

The recommendations are statements by the US Public Health Service Advisory Committee on Immunization Practices and were originally prepared by the National Center for Disease Control.

Dr. Thomas G. Glass, Jr., chairman of the Committee on Public Health, expressed the hope that hospitals would place this information in the hands of emergency room personnel and include it in the procedural manuals of emergency rooms. In a covering letter to administrators, Dr. Glass stated that the Committee is concerned that there is a tendency toward excessive

What's on your patient's face...

may be more important than his chief complaint

Patient P.T.* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electrosurgical procedures.

Patient P.T.* seen on 6/12/67, seven weeks after discontinuation of 5% FU cream. Reaction has subsided. Residual scarring not seen except that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.

*Data on file, Hoffman-La Roche Inc., Nutley, N. J.

The lesions on his face are solar/actinic— so-called "senile" keratoses... and they may be premalignant.

Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics. The typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.

Sequence of therapy— selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; this reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

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Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

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use of tetanus toxoid. According to the new recommendations one booster every ten years is all that is necessary.

In rabies prophylaxis the recommendations stress that if a person is bitten by an animal suspected or known to be rabid, the animal in question should be destroyed and its brain examined.

NEWS

Although routine smallpox vaccination is no longer recommended for the general population, both TMA and the American Medical Association have officially stated that it is good medical practice for all hospital personnel to be immunized against smallpox. A regular program of revaccination every three years is recommended for hospital and health personnel.

1973 encompassed medical advances

Dominating the news in American medicine during 1973 were concrete advances in the areas of cancer and cardiovascular disease research, prevention and treatment, molecular biology, and immunology.

Nine outstanding medical activities during the year, as compiled by the AMA, include: 1) the delivery of cancer research results to the American people; 2) findings that link the common herpes simplex viruses with nine types of cancer; 3) creation of the first artificial gene with potential for life function; 4) the development of a technique for the enzymatic dispersal of rabbit lung into individual viable cells; 5) implantation of about 190 nuclear-powered pacemakers; 6) a nuclear scanning method for identifying the damaged area of the heart in coronary patients; 7) blueprints for a national blood program; 8) new prosthetic devices; and 9) the opening of three new medical schools.

Notice

Texas Medicine will be changing its publication dates this summer in order to make the journal more timely for readers.

During June and July, the journal will be mailed progressively earlier so that starting with the August issue, *Texas Medicine* will be released just prior to the month it is dated.

To assure a smooth transition, the next three issues will be smaller, and the editors will adhere to strict deadlines. During this period, deadlines for news articles, coming meetings, and continuing education will be the first of the month preceding the date of the journal. (For example, June 1 is the deadline for the July issue.)

The editors appreciate the cooperation of readers, advertisers, and others in implementing this journal improvement.

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment media	Original price 9-30-68	Current adjusted price 3-31-74	% Change from 9-30-68
Mercantile National Bank Stock Fund	$10.25	$ 9.76	− 4.78
Loomis-Sayles Capital Development Fund	14.20	13.16	− 7.33
T. Rowe Price Growth Stock Fund[2]	25.93	13.30	+ 2.62
Loomis-Sayles Mutual Fund	16.82	17.87	+ 6.24
Stein Roe & Farnham Balanced Fund	23.34	24.86	+ 6.51
Mercantile Bank Fixed Income Fund	10.00	11.34	+13.40
Standard & Poor 500 Stock Average	101.34	93.98	− 7.26
Dow Jones Industrial Average	935.79	846.68	− 9.52

[1]Includes accumulated dividends and capital gains since 1968.

[2]Stock split two for one, May, 1973.

CAPITAL COMMENTS

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature and Texas administrative agencies.

AUSTIN: On April 18 the General Provisions Committee of the Texas Constitutional Convention adopted the Committee's report which will be submitted to the Convention. Included in its report is a favorable recommendation for the retention of the Medical Practitioners section. By a vote of 17 to 1, the Committee recommended the retention of the section as it exists in the current Constitution.

WASHINGTON: Under pressure by the Senate Finance Committee, the Department of Health, Education and Welfare (HEW) has agreed to move the major operational responsibilities for PSRO from the Office of the Assistant Secretary for Health to Social Security's Bureau of Health Insurance. Assistant Secretary Dr. Charles Edwards, will retain policy direction of the program, but BHI will handle most of the day to day implementation.

WASHINGTON: Opposition from major health organizations and a general lack of interest have caused Rep Paul G Rogers (D-Fla), chairman of the House Subcommittee on Public Health and Environment, to introduce a revised Health Policy and Health Resources Development Act of 1974 (HR 13995). The revised bill incorporates a number of changes made in the original subcommittee bill (HR 12053) after the measure met with a number of objections, particularly to its regulatory provisions. The new bill would give the governors a much stronger role in designated health areas for their states. It would require equal representation for providers and non-providers of health service areas. All mention of rate regulations contained in the original bill has been eliminated in the new bill. Each state would have a Health Coordinating Council. Construction assistance to replace Hill-Burton is deleted in the revised measure. The Subcommittee is aiming at a mid-May hearing on the new bill.

AUSTIN: James T. Doluisio, dean of The University of Texas College of Pharmacy, has been appointed to a nine member national committee charged with providing by June 30 an answer to the controversy raised by the HEW's new "lowest cost drug" policy. The committee is composed of seven physicians and two pharmacists who are specifically to answer the question "whether present day technology can determine that two drugs with the same chemical composition, but produced under different manufacturing processes, will produce the same therapeutic results." The HEW policy which states that the government in its federal health programs will pay only for the "lowest cost drug" has been criticized on the grounds that a particular drug product of the lowest cost may not be the highest quality drug product for the care of a specific patient. Regulations to implement the HEW policy are being drafted.

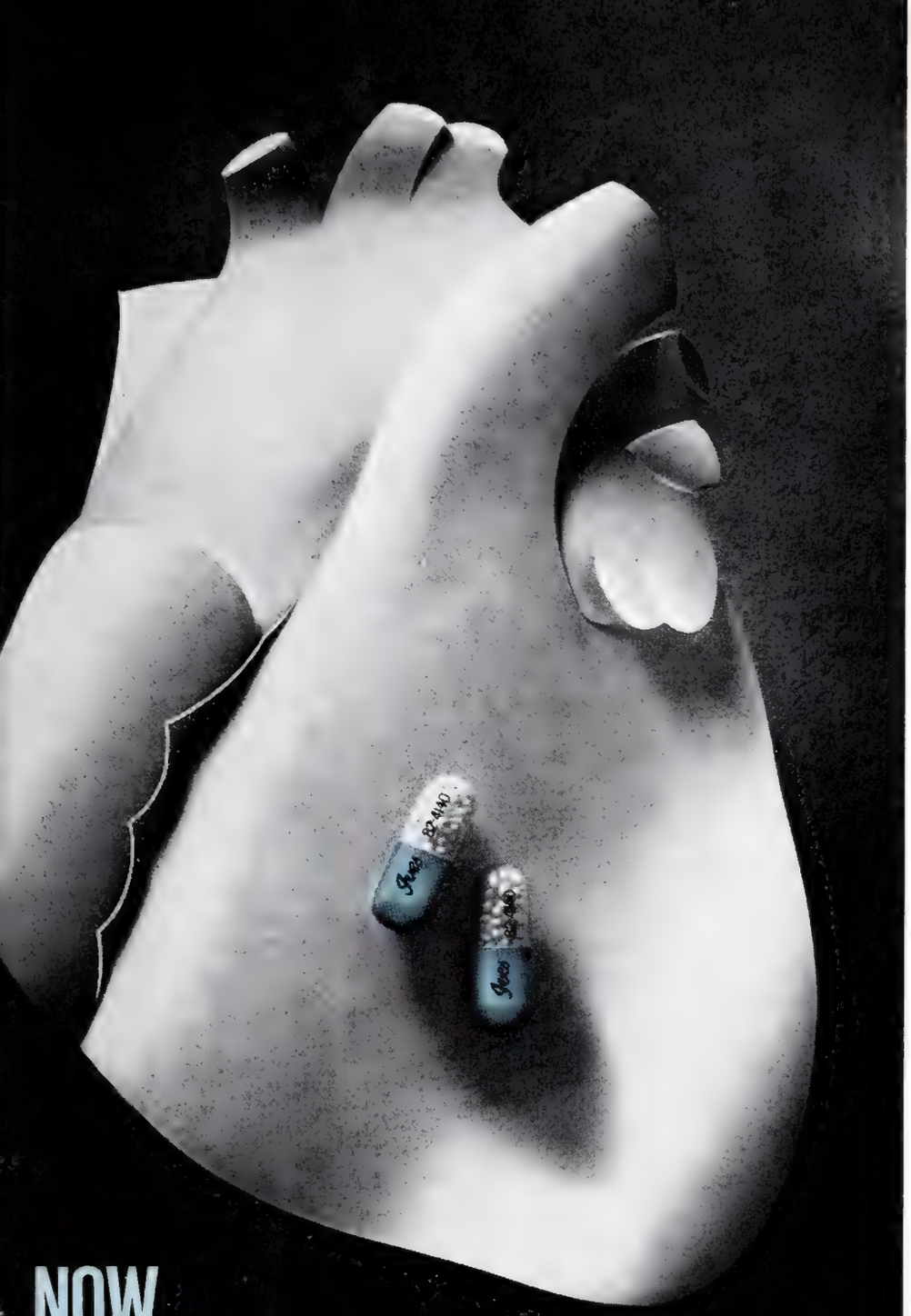
WASHINGTON: Rep Wilbur Mills (D-Ark) and Sen Edward M. Kennedy (D-Mass),

have jointly introduced the Comprehensive National Health Insurance Act of 1974 (HR 13870, S 3286). The House Committee on Ways and Means were scheduled to begin public hearings on the subject of national health insurance April 24.

The Kennedy-Mills proposal is similar to the Administration's proposal and represents a withdrawal from the position previously stated in S 3, the labor sponsored Health Security Act. The new bill provides for inpatient hospital service with no day or dollar limitation, physicians' services and other medical services subject to an annual deductible of $150 and 25% co-insurance. The deductibles, however, would not apply to certain items such as prenatal care, well baby care, and dental care for children. The maximum deductible per family would be $1,000 per year as opposed to $1,500 under the Administration plan. The Kennedy-Mills bill would be mandatory, requiring participation and contribution from all persons. Practitioners would be free to participate in the program, but if they chose not to, they could not provide services under the system. A community rated premium would be determined nationally, and employers would be required to contribute 3% of payroll up to an earnings level of $20,000. Employees would contribute 1% of earnings up to $20,000. Premiums would be collected through the Social Security System, and the new Social Security Board, reporting directly to the President, would direct the program. Existing health insurance carriers would be retained to collect the co-insurance and deductibles, make disbursements, and administer the transaction of insurance claims. The sponsors of the legislation further anticipate that private carriers will continue to write insurance policies covering supplemental benefits. The bill also adopts the Administration's plan for a health credit card so that patients would be billed for co-insurance and deductibles after receiving care.

The legislation would also establish a National Health Development Resources Board within HEW to be responsible for the delivery of health care services provided under the measure. Additional provision is made for prospective budgeting of institutional providers. All services reimbursed by the program would be subject to PSRO review within 2 years of the effective date for payment of benefits.

WASHINGTON: HEW Secretary has recently announced a proposal under which Medicare would "pay for services not covered by the law either because they were not reasonable or necessary or involved custodial care." The proposed regulations are based upon Section 213 of PL 92-603, which deals with the reimbursement of patients, providers and practitioners (when rights have been assigned) with respect to the reimbursement of services found to be unreasonable or unnecessary, or where custodial in nature. Under the proposed system, the Medicare system would pay for the services when neither the person who receives the service nor the person who furnished it could reasonably be expected to know if the services were covered. If the provider of services or the physician knew, or could reasonably be expected to know, that the services were not covered, then neither Medicare nor the beneficiary would be liable for the payment. Presently, if the beneficiary were charged for the non-covered services, Medicare would pay the beneficiary and charge the amount to the provider of services. The proposed rule would establish a system of presumption under which certain providers would be presumed to lack knowledge of non-coverage in specific cases, in the absence of evidence to the contrary.



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The *author's names* and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

The *text* should be narrative with complete sentences, *few abbreviations,* and logical subheading. For *spelling and usage* the editors follow "Dorland's Illustrated Medical Dictionary," 24th edition, and "Webster's Third New International Dictionary, Unabridged." *Quotations* must give credit to both author and source. A concise *introductory summary* is required.

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Contributions to the news section should be sent to the Editorial Offices, 1801 N. Lamar Blvd., Austin 78701, by the 5th of the month preceding the month of publication.

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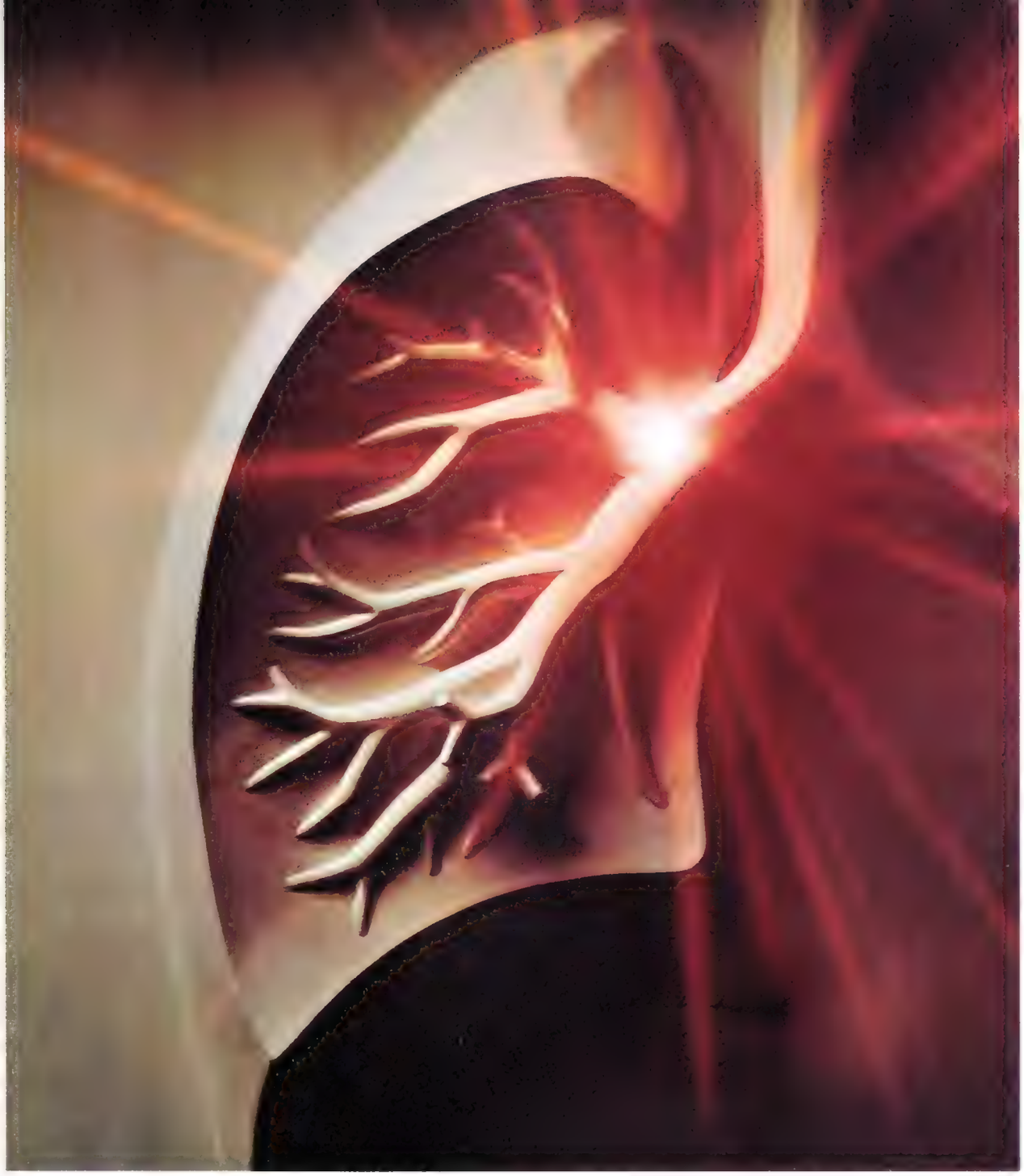
WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**
Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)
Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.
Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)
All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.
Tetracyclines are present in milk of lactating women taking tetracyclines.
To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.
Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).
Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.
Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.
USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.
For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.
Eaton Agent pneumonia: 900 mg daily for six days.
Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.
Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.
Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.
In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.
In streptococcal infections, a therapeutic dose should be given for at least 10 days.
SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73

WALLACE PHARMACEUTICALS
CRANBURY, NEW JERSEY 08512



When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

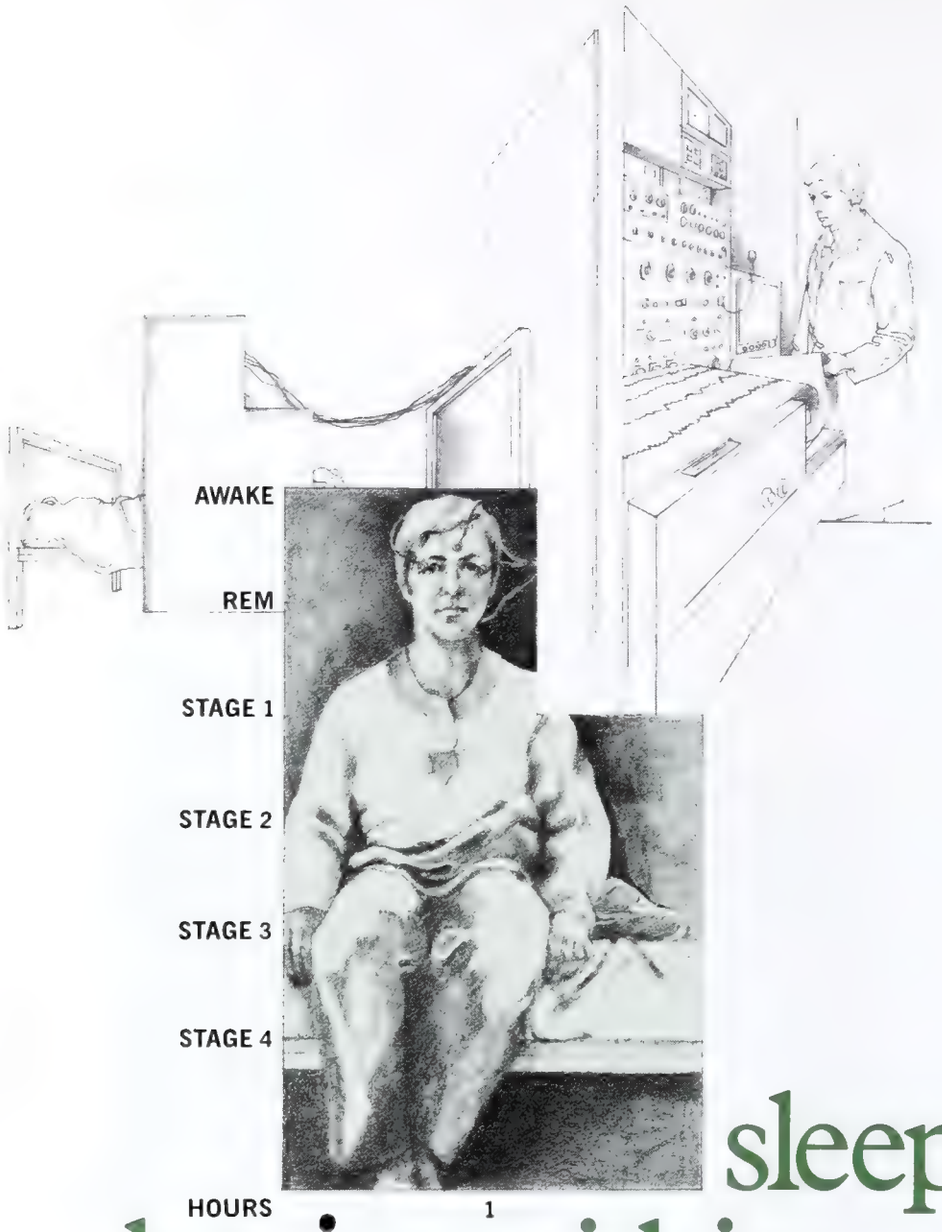
Rondomycin® 300 mg. Capsules

[methacycline HCl]

Delivers from the very first dose:

Studies show that after the first dose serum levels rapidly rise above minimum *in vitro* inhibitory concentrations

*Since many strains are known to be resistant, routine sensitivity testing is recommended.



sleep begins within 17 minutes, on average ...

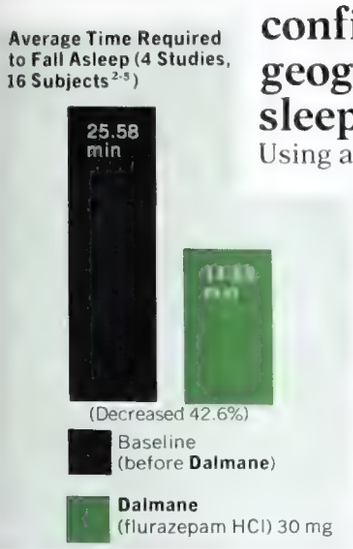
an initial benefit of

Dalmane®

(flurazepam HCl)

proved by a 22-night clinical study of insomnia patients in the sleep research laboratory and at home[1]

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]



confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

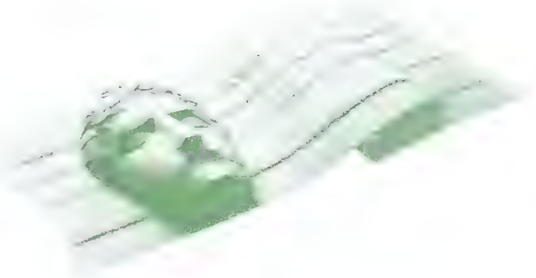
Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage[2-5]

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.
Contraindications: Known hypersensitivity to flurazepam HCl.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.
Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.
Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.
Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



when restful sleep is indicated

Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.* — usual adult dosage
(15 mg may suffice in some patients).
One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.

- **induces sleep within 17 minutes, on average**
- **reduces nighttime awakenings**
- **sustains sleep 7 to 8 hours, on average, without repeating dosage**

REFERENCES: 1. Kales A, *et al*: *Arch Gen Psychiatry 23*:226-232, Sep 1970
2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
3. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

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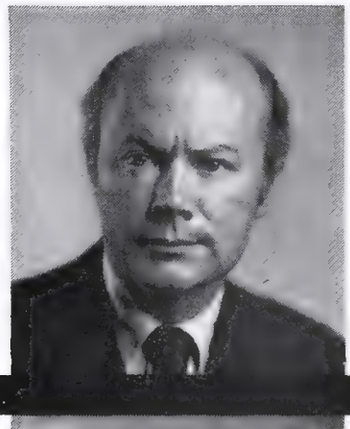
Nutley, New Jersey 07110

Opinion & Dialogue

Is there a need for a drug compendium?

Government Health Official

Henry E. Simmons, M.D.
Deputy Assistant Secretary for Health
Department of Health, Education and Welfare



A drug compendium of the type I envision would fill a definite need for the practicing physician. Such a compendium would give him all the information necessary for using a drug intelligently, and it would do so in a clear, concise, convenient, objective and balanced fashion.

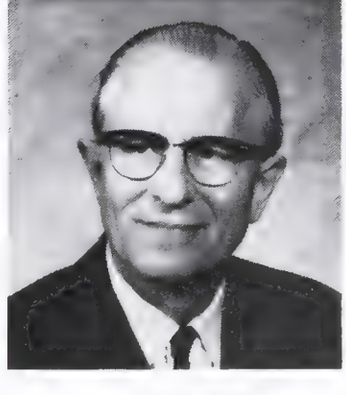
What a Compendium Should Contain

I believe the compendium should inform the doctor what a drug will do, when he should use it, for what type of patient, for how long, in what dose, what benefits his patient is likely to obtain, the risks involved, and cross-reactions with other drugs.

The information would be based on the package insert and have the same legal status. In fact, a complete compendium with complete and current information might even eliminate the necessity

Maker of Medicine

Joseph F. Sadusk, Jr., M.D.
Warner-Lambert Company



A drug compendium, or preferably compendia, should, I believe, be private, not federal, in sponsorship. They should contain comprehensive listings of drugs available for prescribing. They should be single, legibly printed volumes of reasonable size, updated quarterly or semiannually and completely revised every year.

Function of a Compendium

A compendium should furnish the following information on drugs in the following order: indications for use, side effects, adverse drug reactions, contraindications, drug interactions, drug dosage and the dosage forms marketed. Drug prices should not be included because they vary so widely and change rapidly.

No compendium should set forth drugs of choice or discuss relative efficacy. Such questions must be left for the practicing physician to decide, whether on the basis of the medical literature, his own clinical experience, advice of colleagues, information supplied by manufacturers, and so on.

Nor should a compendium undertake to educate the doctor on how to use drugs. Rather, it must be a reference source designed primarily to refresh his memory as to drugs he may not use regularly. It

or a package insert in many instances. This would constitute a substantial saving for the manufacturer.

By a complete compendium, I do not mean a volume of prohibitive size. You don't need a book describing 25,000 products with an enormous amount of repetition. Rather, drugs should be arranged by class. Mutually applicable information would be provided, along with brief discussions pinpointing differences in specific drugs of that class. Listings would be cross-indexed in a useful way.

Other Available Documents as Sources of Information

Existing references such as PDR and the AMA Drug Evaluation are obviously useful but they are incomplete. Either they are not cross-referenced by generic name and do not group drugs with similar characteristics, or they do not list all the available and legally marketed drugs. And some of those omitted may be very useful. On the other hand, drugs made by more than one supplier, tetracycline for example, may be fully described a dozen times in the same book.

While perhaps PDR could be rearranged and cross-indexed with generics included, and while the AMA Drug Evaluation might also be modified and expanded, I am not sure that the end result would have all the attributes required for a useful compendium. At the same time, you would run the risk of amassing a voluminous and unwieldy tome.

Should Editorial Comments Accompany the Listings?

Subjective judgments, in my opinion, have no place in a compendium. However, if there is substantial evidence based on a sound body of science concerning relative efficacy of several drugs, certainly that information should be included. The committee of experts compiling and editing a particular section would also have to assess and indicate instances where a meaningful difference between drugs is pertinent.

Sponsorship, Compilation and Editing

Producing a book like this would undoubtedly be difficult and demanding. It would obviously take a great deal of talent and expertise, and would require a varied and experienced group, ranging from writers and editors to highly skilled clinicians and pharmacologists. Style, format and clarity of language would play an important part in determining the usefulness of the book. And it should be updated periodically and completely revised annually.

I have no opinion whether the government or the private sector should sponsor and/or finance the compendium. What is most important is that the compendium be an authoritative, objective and useful source of information for the doctor to have at hand as a ready reference.

---

should in no way imply control over the practitioner's prerogatives.

Why Another Compendium?

A practicable, single-volume compendium cannot, nor is it necessary to, include all drugs on the market today. From my practice of internal medicine for some 15 years, my experience as a consultant, and as a faculty member of four or five medical schools, I would estimate that a doctor uses only 30 to 35 drugs regularly. The 1972 Physicians' Desk Reference, incidentally, contained about 2,500 entries.

As to whether there should be a federal compendium, in my opinion, as stated earlier, the answer is easy—there should *not* be one. The proposal assumes that existing compendia are inadequate. We're not sure of that at all. Whatever its imperfections, the present drug information system in the U.S. is open, multifaceted, pluralistic and extensive. Good compendia exist, as well as other ample sources on drug therapy, ranging from journal literature through AMA Drug Evaluation to company materials. Not all physicians may use such sources as often or as well as they should, but that is the fault of the man, not of the sources.

In any event, rather than produce another book, it makes much more sense to work on improving existing compendia, and perhaps they could, as knowledge advances, include more accumulated clinical data and experience, and more information on drug interactions and adverse reactions.

Implications of a Federal Compendium

Take a hard look at the implications of a federal compendium. It would have the force of law, virtually dictating what drugs to use and how to use them. In effect, it would be a regulatory document with legal or quasi-legal status, posing medical/legal problems similar to those the doctor may now encounter if and when he departs from the provisions of the package insert. A compendium under federal aegis would tend to restrict decisions on drug therapy to one orthodox level—a most dangerous trend for medicine.

New Compendium—A Medical Option

I detect no ground swell of initiative or support whatsoever for a federal compendium—or, for that matter, for a new compendium of any type. A 1969 PMA survey conducted by Opinion Research Corporation found that only 15 per cent of those physicians interviewed felt a new compendium was needed. And a large majority did not favor the involvement of the federal government if one were to be created, preferring instead a nongovernmental consortium.

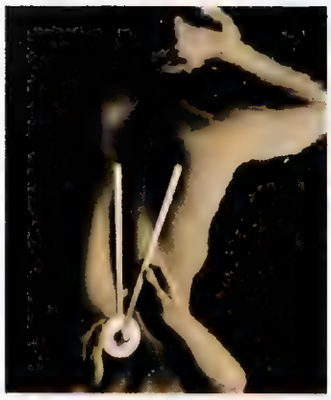
Even if we come to a time when the medical profession itself opts for a new kind of compendium, it should be handled and financed, ideally, outside both government and industry. Final review and editorial authority could be delegated, say, to specialty bodies and medical societies—but above all, *not* the government.

Surely the health care system in the United States has far more vital matters to consider than the extensive cost and effort that would have to go into the preparation and maintenance of a new, monolithic compendium, and especially one bearing the imprimatur of the federal government.

Opinion & Dialogue

What is your opinion, doctor? We would welcome your comments.

The Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005



For relief of low back pain*
(including intervertebral disc)

Bed rest, moist heat, exercise and 'Soma 350' (carisoprodol) can help relax muscle spasm, relieve mild-to-moderate pain, restore range of motion.*

Economically...with only one tablet *q.i.d.*

Measure the results yourself. (Wallace will even send you a complimentary goniometer.)

* **Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:

"Possibly" effective: for symptomatic relief in conditions characterized by skeletal muscle spasm and mild to moderate pain.

Final classification of this indication requires further investigation.

Contraindications: Acute intermittent porphyria and allergic or idiosyncratic reactions to carisoprodol or related compounds such as meprobamate, mebutamate, tybamate.

Warnings: *Idiosyncratic Reactions:* Rarely, first dose has been followed by extreme weakness, transient quadriplegia, dizziness, ataxia, temporary vision loss, diplopia, mydriasis, dysarthria, agitation, euphoria, confusion, disorientation. Symptoms usually subside during the next several hours. Supportive and symptomatic therapy, including hospitalization, may be necessary.

Pregnancy and Lactation: Safe use not established; weigh potential benefits against potential hazards in pregnancy, nursing mothers, or women of childbearing potential.

Children Under Five: Drug not recommended.

Potentially Hazardous Tasks: Driving a motor vehicle or operating machinery.

Additive Effects: Possible additive effects between carisoprodol, alcohol, and other CNS depressants or psychotropic drugs.

Drug Dependence: Use cautiously in addiction-prone patients.

Precautions: To avoid excess accumulation, use caution in patients with compromised liver or kidney function.

Adverse Reactions: *Central Nervous System:* Drowsiness, dizziness, vertigo, ataxia, tremor, agitation, irritability, headache, depressive reactions, syncope, insomnia.

Allergic or Idiosyncratic: Usually seen after 1-4 doses in patients not previously exposed, e.g., rash, erythema multiforme, pruritus, eosinophilia, fixed drug eruption with cross reaction to meprobamate. More severe manifestations: asthma, fever, weakness, dizziness, angioneurotic edema, smarting eyes, hypotension, anaphylactoid shock. Stop drug, treat symptomatically (e.g., possible use of epinephrine, antihistamines, and in severe cases corticosteroids).

Cardiovascular: Tachycardia, postural hypotension, facial flushing.

Gastrointestinal: Nausea, vomiting, hiccup, epigastric distress.

Hematologic: Leukopenia and pancytopenia (on carisoprodol plus other drugs).

Usual Adult Dosage: One 350 mg tablet three times daily and at bedtime.

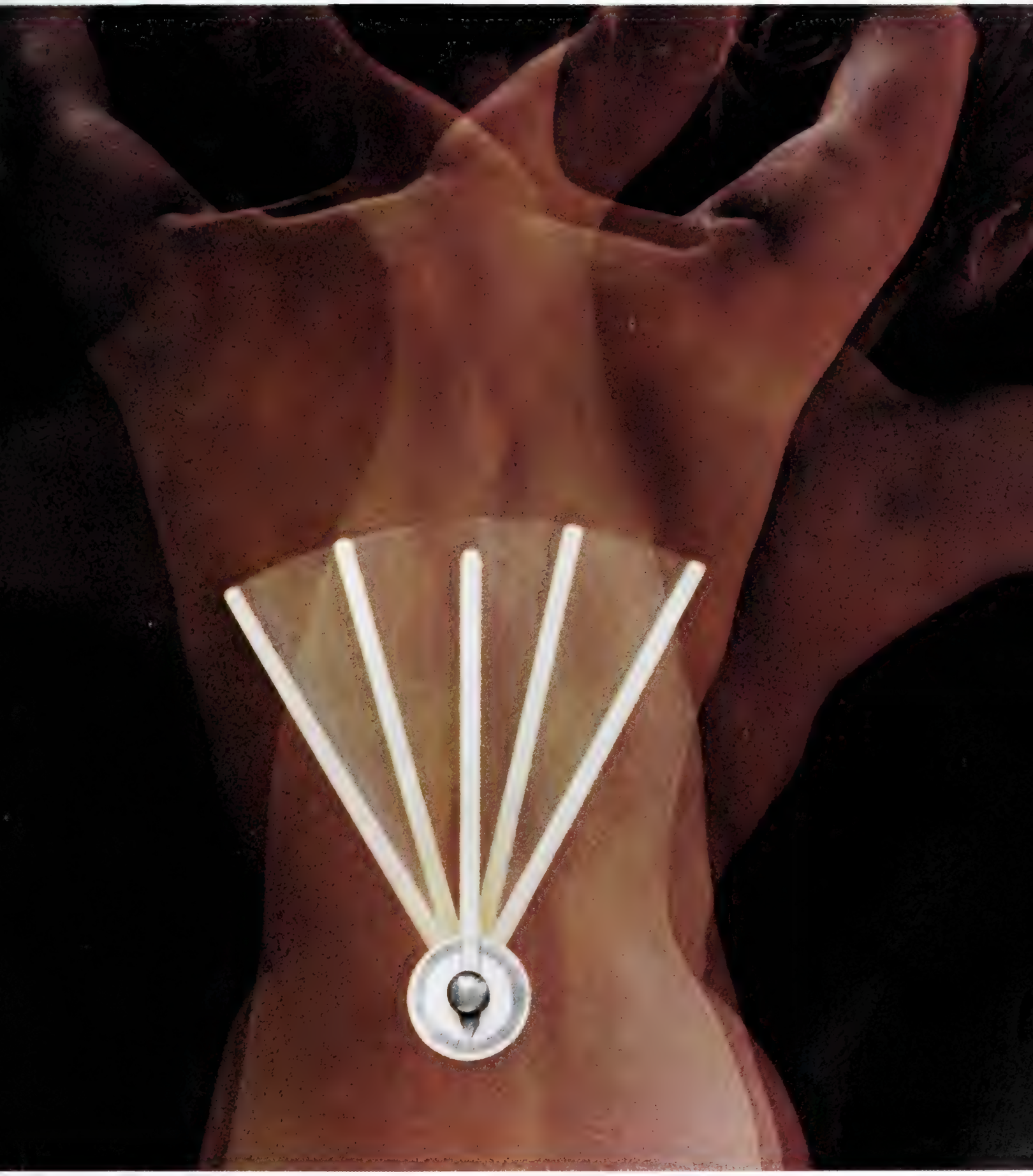
Overdosage: Has produced stupor, coma, shock, respiratory depression, and, very rarely, death. Overdosage of carisoprodol plus alcohol or other CNS depressants or psychotropic drugs can be additive. Empty stomach, treat symptomatically; cautiously give respiratory assistance, CNS stimulants, pressor agents as needed. Carisoprodol is metabolized in the liver and excreted by the kidney. Diuresis and dialysis have been used successfully with related drug meprobamate. Carefully monitor urinary output; avoid overhydration; observe for possible relapse due to incomplete gastric emptying and delayed absorption.

Before prescribing, consult package circular or latest PDR information.

Rev. 5/72

WALLACE PHARMACEUTICALS Cranbury, N. J. 08512

Soma® 350 its power may
(carisoprodol) 350 mg tablets



e measured in movement

Integument!

Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.

INDICATIONS: *Therapeutically,* used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

PRECAUTION: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

NEOSPORIN® Ointment

(POLYMYXIN B-BACITRACIN-NEOMYCIN)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q.s. In tubes of 1 oz. and ½ oz. and 1/32 oz. (approx.) foil packets.

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COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION

The 123rd Annual Convention of the American Medical Association will be held June 22-27 in Chicago. Dealing with health issues and medical knowledge from the viewpoint of the practicing physician is the continuing aim of the scientific program. A total of 54 scientific sessions are scheduled, in addition to 36 postgraduate courses. Along with scientific sessions will be an array of exhibits and the presentation of 30 medical films.

A new feature of the 1974 convention will be a series of fireside forums, informal evening presentations at the downtown Hyatt House Hotel, in which participants will visit one of six Chicago medical schools via videotapes made by the faculty working with equipment and patients. The faculty which assisted in the tapings will be present to conduct informal discussions.

During the week, the AMA will present its highest honor—the Distinguished Service Award—to Dr. William F House, Los Angeles, a specialist in otology. The AMA's Layman's Citation for Distinguished Service will be presented to Nathan J Stark, Kansas City, Mo, president of the Kansas City General Hospital and Medical Center Corp, chairman of Kansas City Metropolitan Hospital Planning Council, chairman of the advisory council of Missouri Regional Medical Program, and chairman of the Committee on Hospital Governing Boards of the American Hospital Association.

Contact: American Medical Association, 535 N Dearborn St, Chicago 60610.

AMERICAN HEART ASSOCIATION, TEXAS AFFILIATE

American Heart Association, Texas Affiliate, presents its 1st Annual Stroke Club Conference June 21, at the Sheraton-Fort Worth Hotel, Fort Worth. Program topics include history of stroke club concept, American Heart Association involvement, and the psychological effects of stroke. The objective is to demonstrate how most stroke victims can be helped to help themselves and to demonstrate to the families of stroke victims how they can play an important role in helping the stroke victim regain his identity.

Contact: American Heart Association, PO Box 9929, Austin 78766.

CURRENT MEETINGS IN TEXAS

TEXAS COMMISSION ON ALCOHOLISM presents its 17th Annual Institute of Alcohol Studies July 7-11 at The University of Texas at Austin. Among the goals of the institute are the promotion of the commonality of the problem of alcohol abuse and alcoholism to all service providers and the need to coordinate in order to deal with it comprehensively. The Institute will provide the most current and factual information on program innovations in such areas as education, training, public information, treatment, rehabilitation, evaluation, occupational activities, and grants development; on referral services; on national programming; and on state and federal legislative and judicial developments. Contact: Wayne L Ewen, Texas Commission on Alcoholism, 809 Sam Houston Bldg, Austin 78701, Dir.

TEXAS STATE BOARD OF MEDICAL EXAMINERS will hold its State Board Examinations June 11-13 in Municipal Auditorium, Austin. Contact: Dr. A Bryan Spires, Jr, Southwest Tower Bldg, Suite 900, 211 E Seventh St, Austin 78701, Sec.

CURRENT NATIONAL MEETINGS

AMERICAN BOARD OF FAMILY PRACTICE will give its next two-day written certification examination on Oct 19-20. It will be held in five centers geographically distributed throughout the United States. Each physician desiring to take the examination must file a completed application with the Board office prior to June 15, 1974. Information regarding the examination may be obtained by writing Dr. Nicholas J Pisacano, American Board of Family Practice, University of Kentucky Medical Center, Annex 2, Room 229, Lexington, Ky 40506, Sec.

For other courses and symposiums, see Continuing Education Courses, pp 43-44.

Calendar of Listings

■ Denotes Texas Meetings

JUNE

AMERICAN DIABETES ASSOCIATION, Atlanta, Ga, June 15-16, 1974. J Richard Connelly, American Diabetes Association, 18 E 48th St, New York 10017, Exec Dir.

AMERICAN MEDICAL ASSOCIATION, Chicago, June 22-27, 1974. Dr. Ernest B Howard, 535 N Dearborn St, Chicago 60610, Exec VPres.

AMERICAN NEUROLOGICAL ASSOCIATION, Boston, June 10-12, 1974. Dr. Samuel A Trufant, Cincinnati General Hospital, Cincinnati, Ohio 45229, Sec.

AMERICAN PHYSICAL THERAPY ASSOCIATION, Montreal, Can, June 14-22, 1974. Royce P Noland, 1156 15th St NW, Washington, DC 20005, Exec Dir.

ENDOCRINE SOCIETY, Atlanta, Ga, June 12-14, 1974. Mrs. Marcella M Branch, 1141 Classen Blvd, Suite 319, Oklahoma City 73106, Exec Sec.

■ MEDICAL LIBRARY ASSOCIATION, San Antonio, June 2-4, 1974. John S LoSasso, Medical Library Association, 919 N Michigan, Suite 3208, Chicago 60611, Exec Dir.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Austin, June 11, 1974. Dr. A Bryan Spires, Jr, 211 E 7th, Austin 78702, Exec Dir.

JULY

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Seattle, July 25-27, 1974. Mrs. Margaret H Henry, 36391 Maple Grove Rd, Willoughby Hills, Ohio 44094, Exec Sec.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, July 12-13, 1974. F C Schmidt, 1809 E 18th, Denver 80218, Exec Off.

■ TEXAS COMMISSION ON ALCOHOLISM, Austin, July 7-11, 1974. K E Beahan, 809 Sam Houston State Office Bldg, Austin 78701.

■ TEXAS PHARMACEUTICAL ASSOCIATION, Houston, July 21-25, 1974. Luther R Parker, R Ph, PO Box 4487, Austin 78701, Exec Dir.

SEPTEMBER

■ AMERICAN ACADEMY OF PEDIATRICS, TEXAS CHAPTER, El Paso, Sept 20, 1974. Dr. Paul Meyer, 3121 Procter, Port Arthur, Tex 77640, Sec.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, Denver, Sept 23-29, 1974. Dene R Murray, One E Wacker Dr, Suite 1510, Chicago 60601, Exec Dir.

AMERICAN ASSOCIATION OF MEDICAL CLINICS, Washington, DC, Sept 4-8, 1974. James B Cobb, PO Box 949, Alexandria, Va 22313, Exec Off.

AMERICAN ROENTGEN RAY SOCIETY, San Francisco, Sept 24-27, 1974. Dr. Ted F Leigh, Emory University Clinic, Atlanta, Ga 30322, Exec Sec.

■ BLACKFORD MEMORIAL LECTURES, Denison, Sept 7, 1974. Dr. John D Gleckler, 211 N Fannin, Denison 76020, Chrmn.

FLYING PHYSICIANS ASSOCIATION, Biloxi, Miss, Sept 22-27, 1974. Albert Carriere, 801 Green Bay Rd, Lake Bluff, Ill 60044, Business Counsel.

■ TEXAS MEDICAL ASSOCIATION, Austin, Sept 20-22, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

■ TEXAS PEDIATRIC SOCIETY, El Paso, Sept 19-21, 1974. Mrs. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

WORLD MEDICAL ASSOCIATION, Stockholm, Sweden, Sept 1-8, 1974. Ms. Margaret L Natwick, World Medical Association, 10 Columbus Circle, New York 10019, Exec Sec.

OCTOBER

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Los Angeles, Oct 14-17, 1974. Roger Tusken, American Academy of Family Physicians, 1740 W 92nd St, Kansas City, Mo 64112, Exec Dir.

■ AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Dallas, Oct 6-10, 1974. Dr. C M Kos, 15 Second St SW, Rochester, Minn 55901, Sec-Treas.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, Cincinnati, Oct 15-20, 1974. J J Garvey, 2317 W Jefferson St, Suite 208, Joliet, Ill 60435, Exec Sec.

■ AMERICAN ASSOCIATION OF OPHTHALMOLOGY, Dallas, Oct 5-10, 1974. Lawrence A Zupan, 1100 17th St NW, Washington, DC, 20036.

AMERICAN CANCER SOCIETY, New York City, Oct 14-18, 1974. Lane W Adams, 219 E 42nd St, New York 10017, Exec VPres.

AMERICAN COLLEGE OF SURGEONS, Miami Beach, Oct 21-25, 1974. Dr. C Rollins Hanlon, American College of Surgeons, 55 E Erie St, Chicago 60611, Dir.

AMERICAN DIETETIC ASSOCIATION, Philadelphia, Oct 7-11, 1974. Robert M Crum, JD, American Dietetic Association, 620 N Michigan Ave, Chicago 60611, Exec Dir.

AMERICAN FRACTURE ASSOCIATION, Atlanta, Oct 20-23, 1974. Dr. H W Wellmerling, 600 Livingston Bldg, Bloomington, Ill 61701, General Sec.

AMERICAN MEDICAL RECORD ASSOCIATION, San Francisco, Oct 13-17, 1974. Mrs. Mary Waterstraat, 815 N Michigan Ave, Suite 1850, Chicago 60611, Exec Sec.

■ AMERICAN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGEONS, Houston, Oct 27-Nov 1, 1974. Dallas Whaley, 29 E Madison, Chicago, Ill 60602, Exec VPres.

INTERNATIONAL CANCER CONGRESS, Florence, Italy, Oct 20-26, 1974. Dr. Murray M Copeland, M D Anderson Hospital and Tumor Institute, Houston 77025.

NOVEMBER

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, San Francisco, Nov 16-19, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN ASSOCIATION OF BLOOD BANKS, Anaheim, Nov 9-14, 1974. Ms. Lois James, 1828 L St NW, Washington, DC 20036, Exec Sec.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, San Francisco, Nov 20-22, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN DENTAL ASSOCIATION, Washington, DC, Nov 10-14, 1974. C Gordon Watson, 211 E Chicago Ave, Chicago 60611, Exec Dir.

■ AMERICAN HEART ASSOCIATION, Dallas, Nov 18-23, 1974. William W Moore, 44 E 23rd St, New York 10010, Exec Off.

AMERICAN SOCIETY OF CYTOLOGY, New York, Nov 6-9, 1974. Dr. Warren R Lang, Health Sciences Center, 130 S 9th St, Suite 1006, Philadelphia 19105, Sec-treas.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, Chicago, Nov 10-14, 1974. Dr. John A D Cooper, One Dupont Circle, NW, Washington, DC 20036, Pres.

INTERNATIONAL COLLEGE OF SURGEONS, Portland, Ore, Nov, 1974. Dr. Virgil T DeVault, 1516 Lake Shore Dr, Chicago 60601, Exec Off.

MEDICAL SOCIETY OF THE US AND MEXICO, Guadalajara, Mex, Nov 6-10, 1974. Mrs. Virginia E Bryant, 333 W Thomas, No 207, Phoenix, Ariz 85013, Exec Sec.

SOUTHERN MEDICAL ASSOCIATION, Atlanta, Nov 17-20, 1974. Robert F Butts, 2601 Highland Ave, Birmingham 35210, Exec Dir.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, Galveston, Nov 9-13, 1974. Donald C Jackson, 1905 N Lamar Blvd, Austin 78705, Exec Dir.

■ TEXAS MEDICAL ASSOCIATION, Austin, Nov 2-3, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

■ TEXAS NURSING HOME ASSOCIATION, Houston, Nov 20-22, 1974. Sidney D Rich, 6225 Highway 290E, Austin 78723, Exec VPres.

■ TEXAS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Houston, Nov 1-2, 1974. Dr. Bert A DeBord, Scott and White Clinic, Temple 76501, Sec.

DECEMBER

AMERICAN MEDICAL ASSOCIATION, Portland, Ore, Dec 1-4, 1974. Dr. Ernest B Howard, 535 N Dearborn St, Chicago 60610, Exec VPres.

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec 4-7, 1974. Mrs. Betty Suor, 1116 S 5th, Tacoma, Wash 98405, Exec Sec.

■ AMERICAN MEDICAL WOMEN'S ASSOCIATION, Houston, Dec 1-3, 1974. Dr. Claudine Moss Gay, 403 E Capitol St, Washington, DC 20003, VPres.

SOUTHERN SURGICAL ASSOCIATION, Boca Raton, Fla, Dec 9-11, 1974. Dr. W Dean Warren, Emory University, Atlanta 30322, Sec.

■ TEXAS ACADEMY OF INTERNAL MEDICINE, Galveston, Dec 5, 1974. Dr. Tom W Duke, PO Box 3460, Amarillo 79106, Sec.

■ TEXAS SOCIETY OF INTERNAL MEDICINE, Galveston, Dec, 1974. Dr. Willis A Seyffert, Jr, 6006 N Mesa, #100, El Paso 79912, Sec-treas.

JANUARY

■ TEXAS SOCIETY OF PATHOLOGISTS, El Paso, Jan 24-26, 1975. Dr. John A Webb, 704 Medical Towers, Houston 77025, Sec.

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CONTINUING EDUCATION COURSES

MAY

Cardiology
Title: Texas Heart Institute Fifth Annual Symposium
Sponsors: Texas Heart Institute
Location: Texas Children's Hospital Auditorium, Houston
Date: May 30-June 1, 1974
Fee: $50
Credit: 16 elective hours AAFP
Contact: Dr. Robert J Hall, Medical Director, Texas Heart Institute, One Bates Ave, Houston 77025

Hypnosis
Title: Medical and Dental Hypnosis—A Beginner's Guide
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: May 25, 1974
Credit: 6 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Obstetrics and Gynecology
Title: A Basic Course in Colposcopy
Sponsors: Division of Obstetrics and Gynecology, Harris Hospital, Fort Worth
Location: Green Oaks Inn, Fort Worth
Date: May 24-25, 1974
Fee: $125
Contact: Dr. James G Stouffer, Harris Hospital, 1300 W Cannon St, Fort Worth 76104

Radiology
Title: Radiation Biology and Radiological Physics for Radiologists
Sponsors: UT Southwestern Medical School at Dallas; UT Health Science Center at Dallas
Location: Marriott Motor Hotel, Dallas
Date: May 31-June 2, 1974
Fee: $50
Designed for: Radiologists
Contact: Mary Esther Gaulden, PhD, Associate Professor of Radiology, UT Southwestern Medical School, 5323 Harry Hines Blvd, Dallas 75235

JUNE

Cardiology
Title: Cardiac Drugs—A Therapy Seminar; Evaluation of the Patient with Coronary Artery Disease
Sponsors: American Heart Association, Texas Affiliate, Inc, Austin; UT Southwestern Medical School at Dallas
Location: Sheraton Fort Worth Hotel, Fort Worth
Date: June 21, 1974
Fee: $15 members; $20 nonmembers
Credit: 6 elective hours AAFP
Contact: Dudley H. Hafner, Executive Director, American Heart Association, Texas Affiliate, Inc, PO Box 9928, Austin 78766

Hematology
Title: Clinical Hematology
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: June 1-2, 1974
Fee: $65
Credit: 8 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Ophthalmology
Title: Bi-Monthly Clinical Conference in Ophthalmology
Sponsors: UT Health Science Center at Dallas
Location: Parkland Memorial Hospital, Dallas
Date: June 19, Oct 16, Nov 20, 1974
Fee: None
Credit: None
Contact: Dr. John Lynn, Chairman, Dept of Ophthalmology, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Title: Ultrasonography in Ophthalmology
Sponsors: UT Medical School at Houston
Location: Hermann Hospital, Houston
Date: June, 1974
Fee: None
Credit: None
Contact: Dr. Charles Garcia, 6436 Fannin, Suite 403, Houston 77025

Otolaryngology
Title: Hearing and Not Hearing—A Short Course
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: June 22, 1974
Fee: $40
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Pediatrics
Title: Eighth Annual Pediatrics Postgraduate Course
Sponsors: UT Health Science Center at Dallas; Children's Medical Center, Dept of Pediatrics; Woman's Auxiliary to Children's Medical Center
Location: Children's Medical Center of Dallas
Date: June 7-8, 1974
Fee: $20
Credit: 12 prescribed hours AAFP

Contact: Dr. Peggy Sartain, Assistant Professor of Pediatrics, UT Health Science Center, 5323 Harry Hines Blvd, Dallas 75235

Physical Medicine & Rehabilitation
Title: Differential Diagnosis and Management of Muscular Weakness
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: June 8, 1974
Fee: $40
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Statistics
Title: 16th Annual Graduate Summer Session of Statistics in the Health Sciences
Sponsors: UT School of Public Health, Houston; United States Public Health Service
Location: UT School of Public Health, Houston
Date: June 20-Aug 2, 1974
Contact: Summer Session of Statistics, UT School of Public Health, PO Box 20186, Astrodome Station, Houston 77025

JULY

Ophthalmology
Title: Ophthalmology for Family Physicians
Sponsors: Texas Society for the Prevention of Blindness; UT Health Science Center at Houston, Medical School Program in Ophthalmology
Location: North and South Auditorium, Hermann Hospital, Houston
Date: July 20, 1974
Fee: $10
Credit: 6 prescribed hours AAFP
Contact: Joanne Allen, Program Director, Texas Society for the Prevention of Blindness, 3617 Fannin, Houston 77004

Radiology
Title: External Beam, Interstitial and Intracavitary Dosimetry—Principles
Sponsors: UT Health Science Center at Houston; M D Anderson Hospital and Tumor Institute, Houston
Location: M D Anderson Hospital and Tumor Institute, Houston
Date: July 1-12, 1974
Fee: $280
Contact: Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

AUGUST

Dermatology
Title: Dermal Pathology
Sponsors: UT Health Science Center at Houston
Location: Shamrock Hilton Hotel, Houston
Date: Aug 19-23, 1974
Fee: $200
Designed for: Pathologists and Dermatologists
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, PO Box 20367, Houston 77025

Medical Electronics
Title: Clinical Applications of Medical Electronics
Sponsors: Texas Tech University School of Medicine; Texas Tech University College of Engineering, Lubbock
Location: Texas Tech University School of Medicine, Lubbock
Date: Aug 2-4, 1974
Contact: Dr. Orene W Peddicord, Coordinator, Continuing Medical Education, Texas Tech University School of Medicine, PO Box 4569, Lubbock 79409

Pediatrics
Title: Psychological Assessment of Children
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Aug 3, 1974
Fee: $40
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Designed for: Pediatricians
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Research
Title: Current Trends in Clinical Research Technique
Sponsors: UT Health Science Center at Houston; UT System Cancer Center MD Anderson Hospital and Tumor Institute Houston
Location: M D Anderson Hospital and Tumor Institute, Houston
Date: Aug 9-10, 1974
Contact: Office of the Director, UT Health Science Center at Houston, Division of Continuing Education, PO Box 20367, Houston 77025

SEPTEMBER

Internal Medicine
Title: Advanced EKG Course
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Sept 13-14, 1974
Fee: $75
Credit: 10 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Designed for: Internists
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

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INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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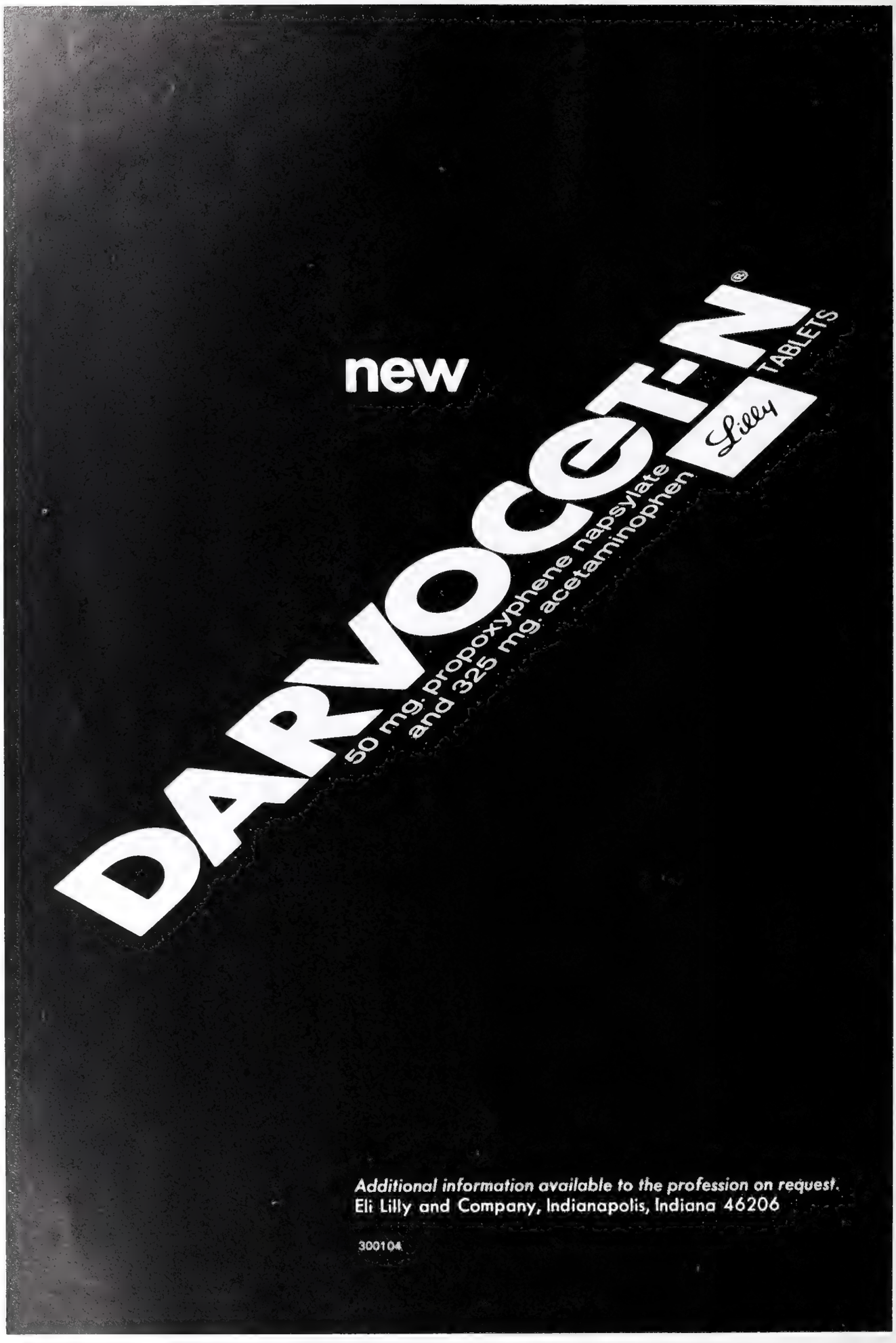
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Post-exposure rabies prophylaxis with emphasis on 1972 recommendations of the PHS Advisory Committee on Immunization Practices

S. J. Lerro, MD, MPH

Texas animal bite surveillance reports from local health authorities covered an average human population of approximately 2.4 million per month in 1972. Major statistics from the Veterinary Public Health Division, Texas State Department of Health are shown in Fig 1.

In the United States the disease in wildlife, especially in foxes, skunks, raccoons, and bats, has increased, accounting for more than 70% of all reported cases of animal rabies in 1971. Wild animals constitute the most important source of infection for man and domestic animals in the United States today. Rabies in humans in the United States has decreased from an average of 22 cases per year in 1946-1950 to only one or two cases per year since 1963.[2] The last human case of rabies secondary to an animal bite in Texas was in 1958. Rabies in domestic animals has diminished both in Texas and in the United States, although dog and cat bites are responsible for most of the antirabies treatments.

Through their city and county health officers, Texas physicians have requested an average of 630 doses of 14-day antirabies Duck Embryo Vaccine per year during 1968-1972.

Prophylaxis Procedures

The following recommendations on *postexposure* rabies prophylaxis from the Public Health Service Advisory Committee on Immunization Practices (ACIP Recommendations 1972) are intended only as a guide. They may be modified according to knowledge of the species of the biting animal, circumstances surrounding the bite, vaccination status of the animal, and presence of rabies in the region.[2]

Local Treatment of Wound Involving Possible Exposure to Rabies

First aid treatment should consist of *immediate washing* and copious flushing with soap and water, 20% soap solution, and/or application of a quaternary ammonium compound* in all bite wounds, scratches, and abrasions including those unrelated to possible exposure to rabies. This is the most effective measure in preventing rabies.

If antirabies serum is indicated (see passive immunization) up to one-half of the total dose should be thoroughly infiltrated around the wound and the rest administered intramuscularly. As in all instances when horse serum is to be used, a careful history should be taken and tests of hypersensitivity performed. Tetanus prophylaxis and measures to control bacterial infections should be given as indicated.[3]

Passive Immunization

Hyperimmune serum is recommended for *all bites* by animals in which rabies cannot be excluded, and for nonbite exposure to

*Zephiran (benzyl ammonium chloride). All traces of soap must be removed before applying quaternary ammonium compounds because soap neutralizes their activity.

1. Texas rabies statistics, 1972.[1]

No. persons bitten by animals: 7,101
Animal bite rate: 295/100,000 population
Age of victims:
< age 10: 37.7%
< age 20: 64.7%
Laboratory-confirmed animal rabies cases: 343 (up 6.5% from 1971)
Confirmed rabies cases in Texas wildlife: 281 (up 11.5% from 1971)
Dog bites: 85% of total animal bites
Cat bites: 11% of total animal bites
One-third of dogs involved in bite incidents had been vaccinated against rabies
73.4% of all animals reported in bite incidents had owners

animals proven to be or suspected of being rabid (Fig 2). When indicated, antirabies serum should be used regardless of the interval between exposure and treatment;[2] *however, the sooner serum is used after a rabid animal's bite when indicated, the quicker the rabies virus will be neutralized.* Hyperimmune serum has proven effective in preventing rabies. Its use in combination with vaccine is considered the best postexposure prophylaxis.[3] However, the only preparation of antirabies serum currently available in the United States is of *equine* origin.

The recommended dose of equine antirabies serum is 40 IU/kg of body weight, ie, approximately 20 IU/lb or 1,000 IU (1 vial)/55 lb.

Active Immunization

Vaccine Without Serum: Administer 14 daily injections of the vaccine in the dose recommended by the manufacturer (Fig 2).
Vaccine With Serum: When serum is used, 21 doses of vaccine are recommended. These may be given as 21 daily doses or 14 doses in the first seven days (either as two separate injections or a double dose), and then seven daily doses. Two booster doses the first ten days and the second at least 20 days after completion of the primary course, are necessary to assure lasting protection.
Precautions: Vaccine should be given subcutaneously in the abdomen, lower back, or lateral aspect of the thighs. Rotation of sites is recommended. Local reactions are common and do not contraindicate continuing treatment.

When rabies vaccine must be given to a person with a history of hypersensitivity to avian tissue, antihistaminic drugs may be given. Epinephrine is indicated in reactions of the anaphylactoid type. If serious allergic manifestations preclude continuation of prophylaxis with DEV vaccine, the Communicable Disease Center in Atlanta, Ga, may be contacted directly by the attending physician for possible use of an alternative vaccine if further immunization is indicated. *The number to call in Atlanta, Ga, is (404) 633-3311 extension 3681 weekdays, or (404) 633-2176 between 5 pm and 7:30 am Monday-Friday and on weekends and holidays.*

2. Post-exposure antirabies guide.[2]

The following recommendations are only a guide. They should be used in conjunction with knowledge of the animal species involved, circumstances of the bite or other exposure, vaccination status of the animal, and presence of rabies in the region.

Animal and Its Condition		Treatment	
		Kind of Exposure	
Species	Condition at Time of Attack	Bite*	Non-Bite*
Wild: Skunk, Fox, Raccoon, Bat	Regard as rabid	S + V1	S + V1
Domestic: Dog	Healthy	None2	None2
	Escaped (unknown)	S + V	V3
Cat	Rabid	S + V1	S + V1
Other	Consider individually — see "Rationale of Treatment"		

* See text definitions
V Rabies vaccine
S Antirabies serum
1 Discontinue vaccine if fluorescent antibody (FA) tests of animal killed at time of attack are negative
2 Begin S + V at first sign of rabies in biting dog or cat during holding period (10 days)
3 14 Doses of DEV

If meningeal or neuroparalytic reactions develop, vaccine treatment should be discontinued altogether. Corticosteroids may interfere with the development of active immunity and should only be used to treat neuroparalytic reactions.[2]

Rationale of Treatment

Every exposure to possible rabies infection must be individually evaluated. In the United States, the following factors should be considered before specific antirabies treatment is initiated:

Species of Biting Animal: Carnivorous animals, especially foxes, skunks, raccoons, coyotes, dogs, and cats are more likely to be infective than other animals. Bites of rabbits, squirrels, chipmunks, rats, and mice seldom, if ever, call for rabies prophylaxis.

Circumstances of Biting Incident: An unprovoked attack is more likely to mean that the animal is rabid. Bites during attempts to feed or handle an apparently healthy animal generally should be regarded as provoked.

Type of Exposure: Rabies is transmitted by inoculation of infectious saliva through the skin. Thus, the likelihood that rabies infection will result from exposure to a rabid animal varies with the nature and extent of the exposure. Two categories of exposure should be considered: (1) bite wounds—any penetration of the skin by teeth; and (2) nonbite wounds—scratches, abrasions, or open wounds.

Vaccination Status of Biting Animal: A properly immunized animal has only a minimal chance of developing rabies and transmitting the virus.

Presence of Rabies in Region: If adequate laboratory and field records indicate that there is no rabies infection in a domestic species within a given region, local health officials are justified in considering this in recommendations on antirabies treatment following a bite by that particular species.

Rabies Vaccine

Duck Embryo Vaccine (DEV): Prepared from embryonated duck eggs infected with a fixed virus and *inactivated* with beta-propiolactone. It is the only rabies vaccine commercially available in the United States (Eli Lilly). The contraindications for its use are hypersensitivity either to the vaccine or to egg protein.

Nervous Tissue Vaccine (NTV): Semple type (nervous tissue) rabies vaccine is no longer available in the United States.

Reactions: Erythema, pruritus, pain, and tenderness at the site of inoculation are common with DEV. Systemic responses, including low-grade fever or, rarely, shock, may occasionally occur late in the course of therapy, usually after five to eight doses. In rare instances, serious reactions have occurred after the first dose of DEV particularly in persons previously sensitized with vaccines containing avian or rabbit brain tissue. Neuroparalytic reactions rarely occur with DEV.

Management of Biting Animal

A healthy domestic dog or cat that bites a person should be captured, confined, and observed by a veterinarian for ten days. The commonly used five- to seven-day observation period may not always be adequate. Any illness in the animal should be reported immediately to the local health department. If the dog or cat develops signs suggestive of rabies, the animal should be sacrificed and the head removed and shipped under refrigeration to a qualified laboratory de-

signated by the local or State Health Department for examination. Early signs of rabies in wild animals or stray animals cannot be interpreted reliably; therefore, any such animal that bites or scratches a person should be killed at once (without unnecessary damage to the head) and the brain sent to the appropriate laboratory for examination for evidence of rabies. If examination of the brain by fluorescent antibody technique is negative for rabies, the bitten person need not be treated.[2]

Discussion

General Consideration: Before any decision can be made regarding treatment of the exposed person, information must be available as to whether the biting animal was rabid.

The biting animal should be confined and observed for ten days except in the case of bats or unmanageable wild species, and preferably under the supervision of a veterinarian. Initiation of treatment in exposed persons should never await the results of the laboratory diagnosis. Local treatment is usually completed and serum and/or vaccine therapy instituted before the laboratory report is received.[3]

Local Treatment of Wounds: Prompt and thorough treatment of all bite wounds, abrasions, and scratches possibly contaminated with rabies virus is of the utmost importance. Immediate flushing and washing of the wound with soap and water, detergent, or other harmless fluids should be carried out. Although judicious use of concentrated nitric acid in puncture wounds has its advocates, there is *no evidence* that this product is more effective than quaternary ammonium compounds or 20% liquid soap solution.

The properties of the rabies virus which are of interest to the practitioner are those which concern its fragility in the extracellular environment and the practical consequences of that fragility. The virus in its free, extracellular state—as it very likely occurs in the virulent saliva—has a very poor resistance compared to the intracellular virus especially that in the neural cells. This fragility of the free virus, its sensitivity to air, to light, and to nearly all antiseptics makes obligatory the thorough cleansing of wounds, now recognized as an urgent step in preventive treatment, and absolutely contraindicates suturing except after careful cleansing. Suturing is too often a veritable reflex action on the part of many practitioners, particularly in the case of mutilating face wounds, but in rabies it is the most dangerous possible treatment.[5]

Hyperimmune Antirabies Serum: Passive immunity by the administration of rabies hyperimmune (equine) serum is designed to prevent the development of rabies before active immunity is obtained from the vaccine treatment.

Partial Active Immunity: This immunity is obtained in the third week after the beginning of the vaccine treatment. However, it takes at least 30 days to achieve maximum immunity.[6]

Since antirabies serum initially blocks the active antibody response to vaccine, the PHS Advisory Committee on Immunization Practices recommends that a booster dose of rabies vaccine should be given 10 and 20 days following the last dose of vaccine so as to overcome the suppressive effect of the serum.[2] Antibody response to *booster* doses of vaccine are demonstrable within three days after injection. It is concluded, therefore, that booster doses of vaccine are essential whenever serum is given with vaccine.[4]

Horse serum induces serum sickness in at least 20% of the individuals who receive it and should, therefore be used only when indicated (Fig 2).

Human derived rabies immune globulin (HRIG) will be available commercially soon.[9-12] There is definite concern, however, that the degree of interference of homologous antiserum to vaccine antibody formation will be greater than that with heterologous (equine) antiserum now being used, chiefly because of the longer half-life of homologous antibody. Therefore, before the great promise of HRIG as a therapeutic modality suggested by this study can be realized, this problem must be investigated and overcome.[9]

Vaccines

Improvement in the safety and effectiveness of rabies vaccine continues to be made. However, the inactive vaccine of avian embryo tissue origin will continue to be the vaccine available during the immediate future. Antihistaminic drugs and/or epinephrine may be given to persons with a history of hypersensitivity to avian tissue vaccine. Since ACTH and corticosteroids interfere with the development of active immunity, they should be used only to treat meningeal or neuroparalytic reactions.[7] Human cell culture rabies vaccine is currently under study. It appears to be feasible and offers potential advantages over existing products. It is reported that this vaccine produces antibody titers after two inoculations similar to those periodically reported in the literature after 14 inoculations of DEV (Duck Embryo Vaccine). Minimal local reactions and no general reactions to the vaccine were noted.[8]

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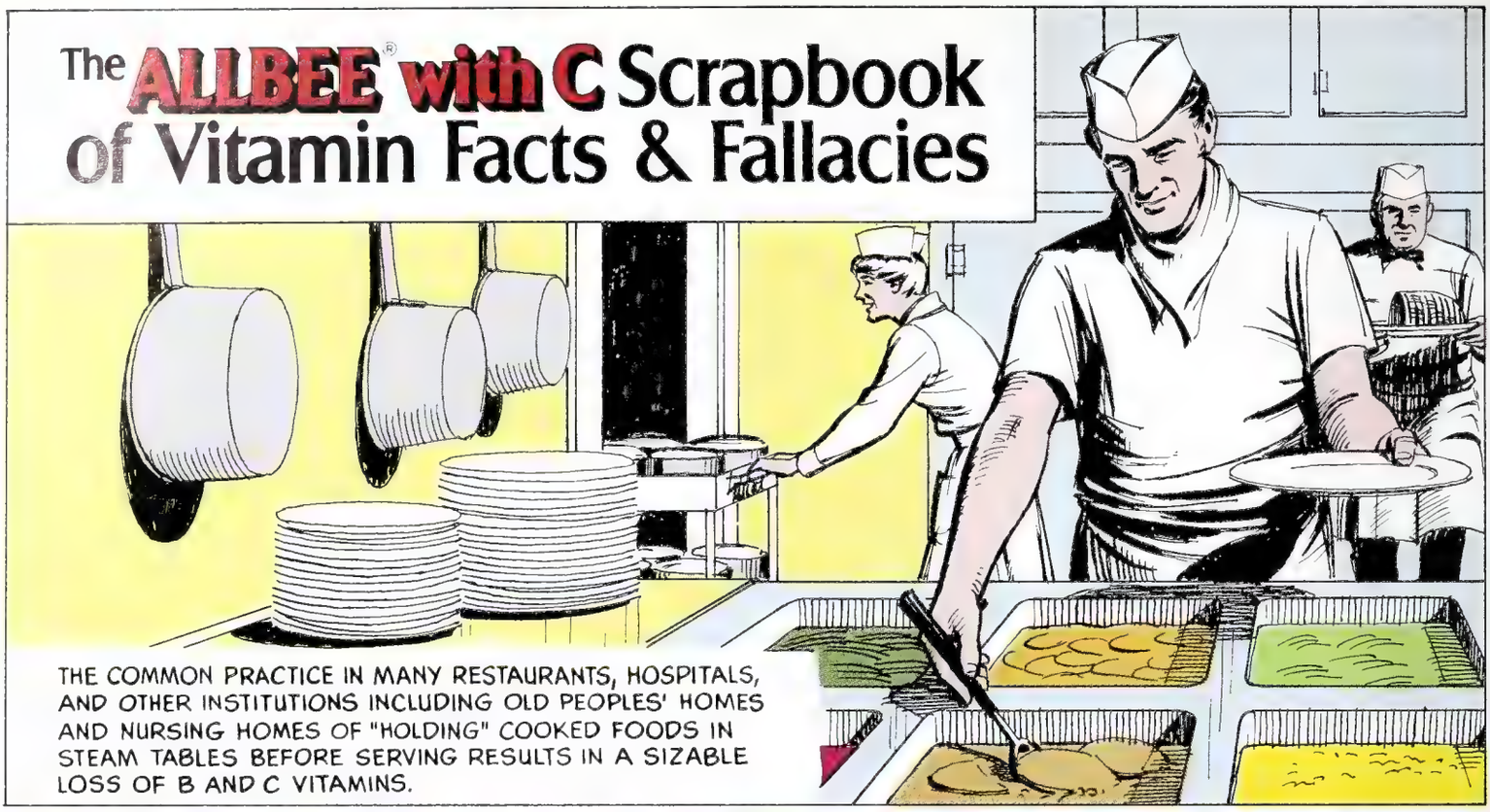

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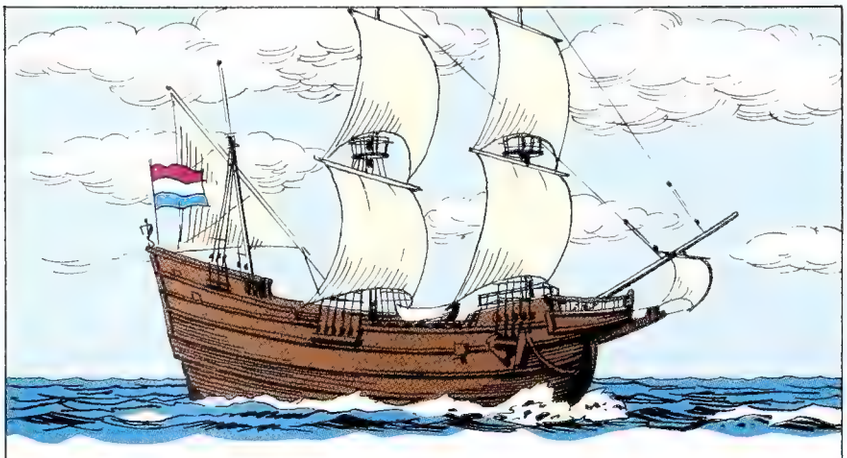

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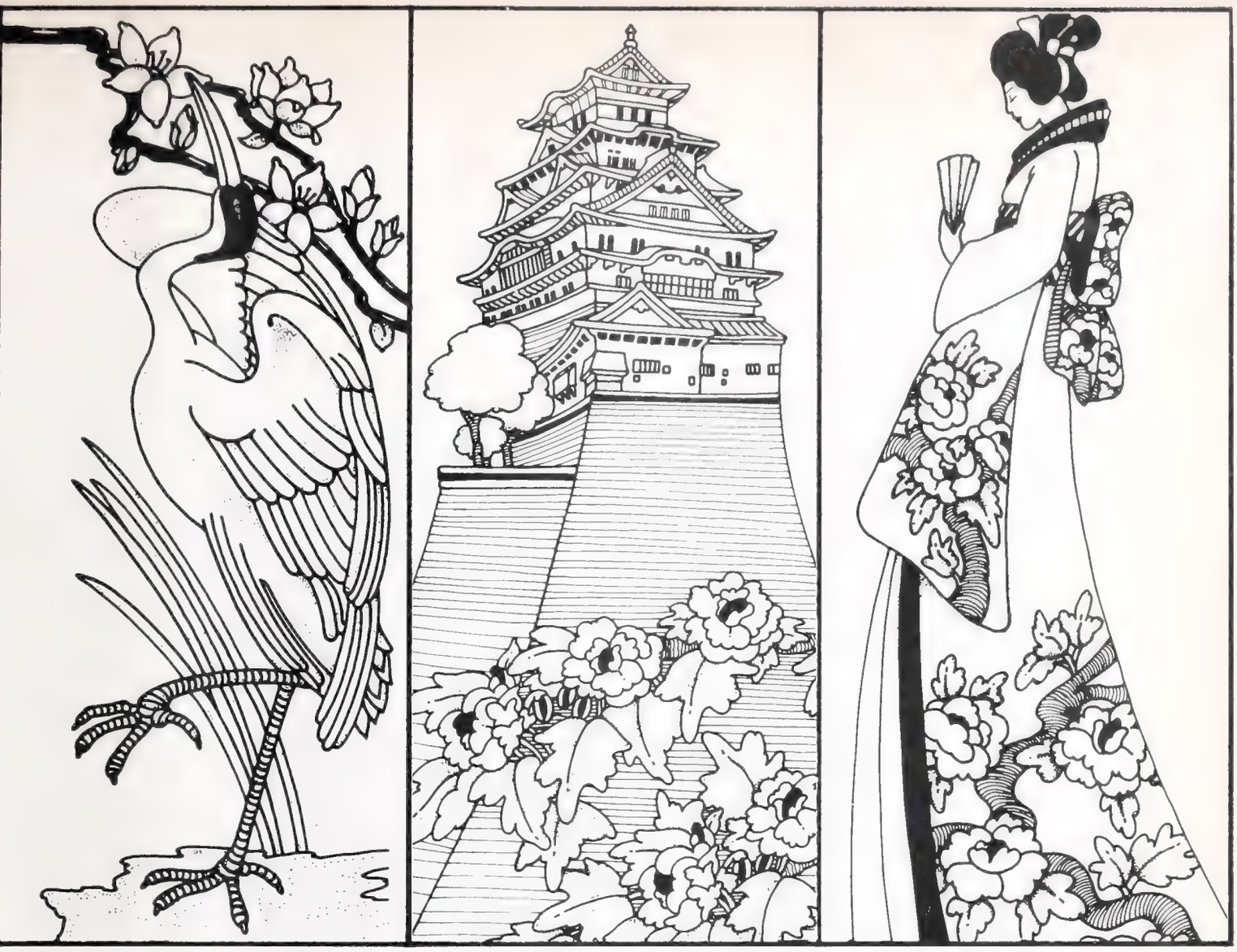

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Practical application of urologic diagnostic techniques

Howard M. Radwin, MD

This article presents, in capsule form, a review of the current status of diagnostic techniques applicable to urology in such a manner as to make them more understandable and useful to physicians who are not urologists. Discussion of such a broad subject in a limited space must of necessity be superficial. In addition, the material presented will be both subjective and interpretative. History, physical examination, and urinalysis will be excluded.

Radiographic Techniques

Intravenous Pyelogram

The intravenous pyelogram, or excretory urogram, remains the cornerstone of the radiographic evaluation of the urinary tract. The basic physiology of the technique is well known, involving the intravenous injection of an iodinated compound which in the dose range commonly employed is handled almost exclusively by glomerular filtration. The substance equilibrates rapidly within the extracellular fluid and the plasma level is a direct function of the injected dose. The initial phase of the urogram demonstrates the "nephrogram" effect, consisting of contrast material in the tubules, where the amount present and its concentration are a function of glomerular filtration rate and proximal tubular reabsorption of water. The subsequent visualization of the renal collecting system is a function of the volume of urine in those structures multiplied by the concentration of contrast agent, thereby reflecting the number of iodine atoms present at a given moment in time to intercept the x-ray beam. Despite the current enthusiasm for the use of the so-called infusion pyelogram, in which large doses of contrast material are delivered with equal volumes of glucose or saline solutions, there is no evidence that this technique will provide a study superior to that obtained by injecting the same amount of contrast material directly without the diluent and, in fact, the plasma level obtained will be higher with the direct injection than with the drip infusion technique.

A rudimentary understanding of this simplified physiology leads to several interesting observations. First, the intensity of the nephrogram in the earliest post-injection film does not depend on the degree of patient hydration, although this is not the case with the visualization of the collecting system in later films.[1] Second, since the appearance of the commonly employed contrast agents in the urine requires only glomerular filtration and the passive reabsorption of water in the proximal tubule, but does not require any complex tubular secretory mechanisms in the more distal nephron for the introduction of contrast agent, intravenous pyelography is successful in the newborn in whom tubular mechanisms are less fully developed. A less highly concentrated urine in this situation will, however, provide for a less intensely visualized collecting system. Attempts to overcome this by means of extreme dehydration of the infant are not warranted and may be dangerous. Third, excretory urograms of good technical quality may be obtained in the severely uremic patient after dialysis, not because of improvement in renal function, but because the reduction in blood urea will obviate the osmotic diuretic effect of urea in the proximal tubule, thus often permitting adequate concentration of the contrast agent for a satisfactory technical study.[2]

A word concerning the complications of intravenous urography appears warranted. A questionnaire sent to 347 teaching hospitals in the United States elicited informa-

tion on 3.8 million excretory urograms.[3] The death rate from excretory urography in this group was 19/million. It appeared to be satisfactorily established that pretesting did not decrease the rate of major complications and death. In fact, serious reactions to the pretest dose occurred in 59 patients and death occurred in 2 others. In addition, the negative pretest gave no assurance that serious adverse reactions would not occur. It appears to be a valid interpretation of this and other studies that if the examination is indicated for compelling medical reasons, that the availability of adequate resuscitative equipment and prescreening of patients unlikely to withstand a serious reaction in terms of cardiovascular and respiratory reserve takes priority over pretesting as a precautionary measure.[4,5] An allergic history correlated poorly with the occurrence of serious reactions, and indeed there is some doubt that the reactions to contrast media are immunologically mediated. There is evidence that they simply represent histamine-release reactions of an idiosyncratic nature.[6]

With regard to the actual performance of the study, in this procedure as in most others, both patient safety and improved results can be obtained from the judicious application of discrimination and intelligence. To be condemned are the routine use of excessive and irritating abdominal preps, the use of an excessive number of exposures as in the common practice of taking films every three minutes for 15 minutes in children (and then supplementing these with oblique studies), and in particular the common practice of failing to monitor pyelographic studies as they are being done so as to select succeeding exposures in such a way as to obtain the maximum information. It is not realistic to assume that the appropriate technique for excretory urography in the investigation of a possible renal mass lesion in a 60-year-old will be identical to that employed as a screening procedure in the investigation of enuresis in a 9-year-old. A variety of methods are available without added expense or patient discomfort to apply to specific diagnostic needs. For example, a film taken 20 or 30 seconds following injection during the nephrogram phase, as well as tomographic cuts taken at later intervals with the appropriate use of oblique positioning, can do much to clarify the possibility of a parenchymal mass. Abdominal compression to further distend a collecting system may be indicated in the investigation of a potential filling defect within the renal calyceal or pelvic systems. A film immediately following release of abdominal compression may provide more complete ureteral filling, as may a film taken in the prone position.

A considerable amount of information concerning both the morphology and function of the lower urinary tract may also be obtained from the excretory urogram. This is often useful in screening studies involving children. If the patient is instructed to urinate prior to injection of the contrast material and subsequently has a voiding film taken approximately 30-45 minutes following injection, excellent visualization of the bladder neck and urethra will often be obtained, offering a voiding study performed in a noninvasive manner without the artifacts induced by dysuria. The use of increased doses of contrast material in the patient with diminished renal function, and of reinjection with delayed films in patients with partial obstruction, are other examples of variations which may increase the productivity of the examination. In short, there is no one correct way to perform intravenous urography. It is a tool of

great potential for manipulation so as to provide diagnostic information in a variety of circumstances if the physician will simply adapt the procedure to his needs.

Cystography and Urethrography

The cystogram and the urethrogram are important in the radiographic study of the lower urinary tract. It should be remembered that while these are traditionally thought of as retrograde studies, they may be performed in an antegrade manner under selected circumstances with some advantages. It has been mentioned that the late film of an intravenous urogram can include a voiding picture which should adequately demonstrate the contour of the bladder neck and urethra during micturition. The study performed this way does not involve urethral catheterization which may add artifacts secondary to external sphincter spasm resulting from dysuria. This is of particular advantage in children who may be unwilling to void following a painful catheterization. In the male child, micturition following catheterization occasionally results in a misleading study due to the fact that as the child initiates voiding and experiences discomfort, he may constrict the external urethral sphincter while the detrusor continues to contract, thereby distending the prostatic urethra and falsely simulating a picture of urethral valves.

In adults and in the vast majority of children, a cystogram performed with contrast material introduced through a urethral catheter can be done without general anesthesia. In those circumstances in which anesthesia is used, as is the case when the study is combined with cystoscopy in a child, a satisfactory voiding film can be obtained by having the anesthesiologist discontinue the delivery of the anesthetic agent a few minutes prior to obtaining the voiding film and by waiting until the child exhibits movement of the limbs before removing the urethral catheter. It is at this moment that spontaneous micturition is most likely to occur. The practice of manual compression of the patient's lower abdominal wall by the physician to increase intravesical pressure will produce a worthless voiding study in most circumstances. This is because the configuration of the proximal urethra and bladder neck during normal micturition will not be duplicated by simply forcing contrast material out of the bladder by external compression, although flow may be obtained in this way. Interpretation of such a study frequently will be fallacious if micturition is not spontaneous.

The use of multiple exposures during urination or of an image intensifier with either cine or video tape will be helpful in evaluating the dynamics of the bladder outlet and urethra in many instances, since a single spot film may be misleading. The voiding film should be performed with the patient in the oblique position whether or not the procedure is performed under anesthesia. To evaluate the presence of vesicoureteral reflux, both low-pressure (15 cm water) and high-pressure (30 cm water) exposures are taken with the patient supine. Oblique projections are useful in the detection of diverticula, and these views may be included if this abnormality is anticipated. The catheter used for the cystogram study should be a straight catheter and not a Foley, because the distended Foley balloon may obscure abnormalities in the area of the trigone.

The retrograde urethrogram is also performed with the patient in the oblique position. Contrast material is injected through a catheter-tip syringe introduced at the meatus of the male, or with a special two-balloon catheter in the female. Its primary usefulness in the female is in the de-

tection of urethral diverticula, but in the male it has a wide variety of applications, including the detection of diverticula, sinus tracts, neoplasms, strictures, and other abnormalities. In the male, the penis should should be held perpendicular to the trunk so as to minimize kinking at the penoscrotal junction. This will provide the least distortion on the urethrogram. In the male, the retrograde urethrogram is most successful in the detection of disease of the anterior urethra, while visualization of the more proximal urethra is of variable quality. The urethrogram is a valuable diagnostic tool which unfortunately is not employed as extensively as might be indicated.

Specifically, it would be of great help when a physician must catheterize a patient in an emergency room but has difficulty in introducing the catheter. After one unsuccessful attempt, which suggests the presence of a urethral abnormality, it would be worthwhile to discontinue catheterization until a urethrogram is performed. If appropriate, further attempts at introduction of the catheter then may be pursued, but a record of the nature of the problem, such as the severity and extent of a urethral stricture, will have been made and may be of great help in the further management of the patient.

Retrograde Studies of the Upper Urinary Tract

Since retrograde catheterization of the ureters and kidneys is a procedure generally limited to performance by urologists, a detailed discussion of this subject will not be included. Detailed radiographic studies of these areas are feasible in most cases and the choice of technique between the use of an occlusive ureteral catheter lodged at the termination of the ureter versus the passage of a ureteral catheter to the renal pelvis is ordinarily made on the basis of whether the area of primary interest is expected to be in the ureter or in the intrarenal collecting system. In addition to the introduction of contrast media for x-ray studies, retrograde catheterization of the upper urinary tract is also useful in obtaining differential studies for bacterial culture, cytologic evaluation, renal function tests, and simply for drainage of an obstructed renal unit.

Angiography

The radiographic study of arteries, veins, and lymphatics is of practical importance to those investigating urologic disease because of significant recent advances in the development of radiographic methods. Renal angiography has become the single most accurate technique for the differential diagnosis of renal masses. A catheter is inserted through the femoral artery to the area of the emergence of the renal arteries from the aorta, and contrast material is injected. Carcinoma is suggested when findings include abnormal intrarenal vasculature with poor organization and so-called tumor vessel appearance, a mass lesion during the nephrogram phase, accessory feeder vessels to the area of the mass, arteriovenous fistulae, and pooling of contrast material. These findings may be detected with greater precision and detail if a selective renal angiogram is performed by introducing the tip of a catheter into the ostium of the renal artery itself. In addition, the renal veins often may be seen during the later phases of the study, which is helpful in the detection of renal vein involvement with a neoplastic growth. Usually this is done more successfully on the left side than on the right because of the shorter length of the right renal vein. Intra-arterial injection of epinephrine may further improve the diagnostic accuracy of

the renal angiogram by causing construction of normal vasculature as opposed to the vessels within the tumor mass, which do not respond to the epinephrine. If the venous phase of the angiogram suggests renal vein invasion, or if this portion of the study is not satisfactory, a vena cavagram is performed so that the urologist will be aware of renal vein and vena cava involvement with tumor prior to surgical exploration. The delineation of other intrarenal lesions such as cysts, arteriovenous fistula, inflammatory disease, and congenital abnormalities is often improved by employing angiography, as is the demonstration of lesions of the renal vasculature per se. Lymphangiography, despite being a tedious procedure to perform, has definite value in demonstrating lymphatic spread of malignant lesions arising from the urinary tract. Although it has been used most commonly in evaluating testicular tumors, it is achieving a recognized place in the evaluation of malignancies of both the bladder and the prostate. Angiographic methods are also quite valuable in the evaluation of suspected cases of renal trauma, and in most instances angiography is both more helpful and less hazardous than is retrograde pyelography.

Scanning Techniques

Renal scans today are performed by both isotopic and sonographic techniques. The former has achieved considerably more prominence, but sonograms appear to have a definite, if more limited, place in the future. Aside from the use of isotopically tagged substances to measure renal function by means of clearance studies, the modern history of the use of isotopes in urologic diagnosis began with the development of the renogram as introduced by Winter in 1956 using Diodrast.[7] This method, which depicts graphically the appearance and disappearance of intravenously introduced radioisotopes by placement of probes over the renal areas, is still employed, primarily with iodohippurate sodium I 131, but has largely been supplanted by other methods. Another early technique for the performance of renal scans involved the use of the conventional rectilinear scanner, which was employed to plot the renal mass as determined by the distribution of intravenously injected chlormerodrin Hg 203. Such scans did relate to renal function if the study was performed after the urine was free of radioisotope because of a linear relationship between the amount of chlormerodrin bound to sulfhydryl groups in the renal tubules and renal blood flow. The method suffered from the disadvantage that the entire kidney was not scanned simultaneously. In addition, its usefulness in detecting morphologic defects was severely limited by its resolution, which was considerably less than that of alternative radiographic procedures. A major improvement in the scanning techniques available to the urologist, both in terms of versatility and precision, was achieved with the introduction of the scintillation camera. This instrument permits the imaging of the entire urinary tract simultaneously on an 11-inch crystal. Thus, a variety of studies may be performed which, in truth, are only limited by the ingenuity of the investigator.[8,9] Because of resolution limitations, the value of the method again does not lie primarily in the detection of morphologic abnormalities such as mass lesions. Its greatest advantage is in the variety of dynamic studies which may be performed to evaluate differential renal function, comparing not only one kidney with the other but areas of interest within a given renal unit. It is often the only means available to determine the relative effectiveness of a given portion of the patient's total nephron mass so as to

further plan an appropriate course of therapy, as might be useful in a patient with bilateral renal disease and a large staghorn calculus in one kidney in which a choice must be made between nephrectomy and extensive nephrolithotomy. Isotopic techniques also are valuable in more specialized situations such as the evaluation of the renal transplant patient undergoing possible rejection. The incorporation of ultrasonography techniques into urologic diagnosis is a more recent phenomenon, and has some promising applications. Particularly in the patient who is not a suitable candidate for such procedures as angiography (perhaps because of allergy to the contrast material) ultrasonic scanning may be appropriate. In terms of comparison with angiographic studies in the evaluation of renal mass lesions, much which is offered by the sonogram seems to be redundant; however, there are some areas in which its contribution may be valuable. An example of this would be the renal carcinoma with central degeneration and no diagnostic vascular pattern. In this situation the sonogram might demonstrate particulate matter within the lesion, suggesting necrotic tumor or debris.

Comment

This brief review of the current status of the more commonly employed urologic diagnostic techniques has overlooked several areas, outstanding among which are those of endoscopy and hydrodynamics. Endoscopic procedures have benefited in recent years from technical improvements in the optics employed. With the exception of the cystometrogram, the use of sophisticated hydrodynamic investigations has generally been restricted to specialists who employ them both for refinement in diagnosis and for better understanding of the pathophysiology of urologic disease with a definite research orientation. Their importance is not to be minimized, but a detailed discussion of their application is beyond the scope of this presentation.

It is fortunate both for the urologic patient and his physician that a variety of specific diagnostic techniques are available. A great deal of the satisfaction in the practice of urology arises from the fact that a logical and systematic application of these methods, employing them in reasonable sequence and with economy, will rarely leave the patient without a precise diagnosis. The accomplished practitioner will be familiar with countless variations in the application of these methods, and his interest in his individual patient will be reflected in the care and thoughtfulness with which he varies his approach to suit his needs.

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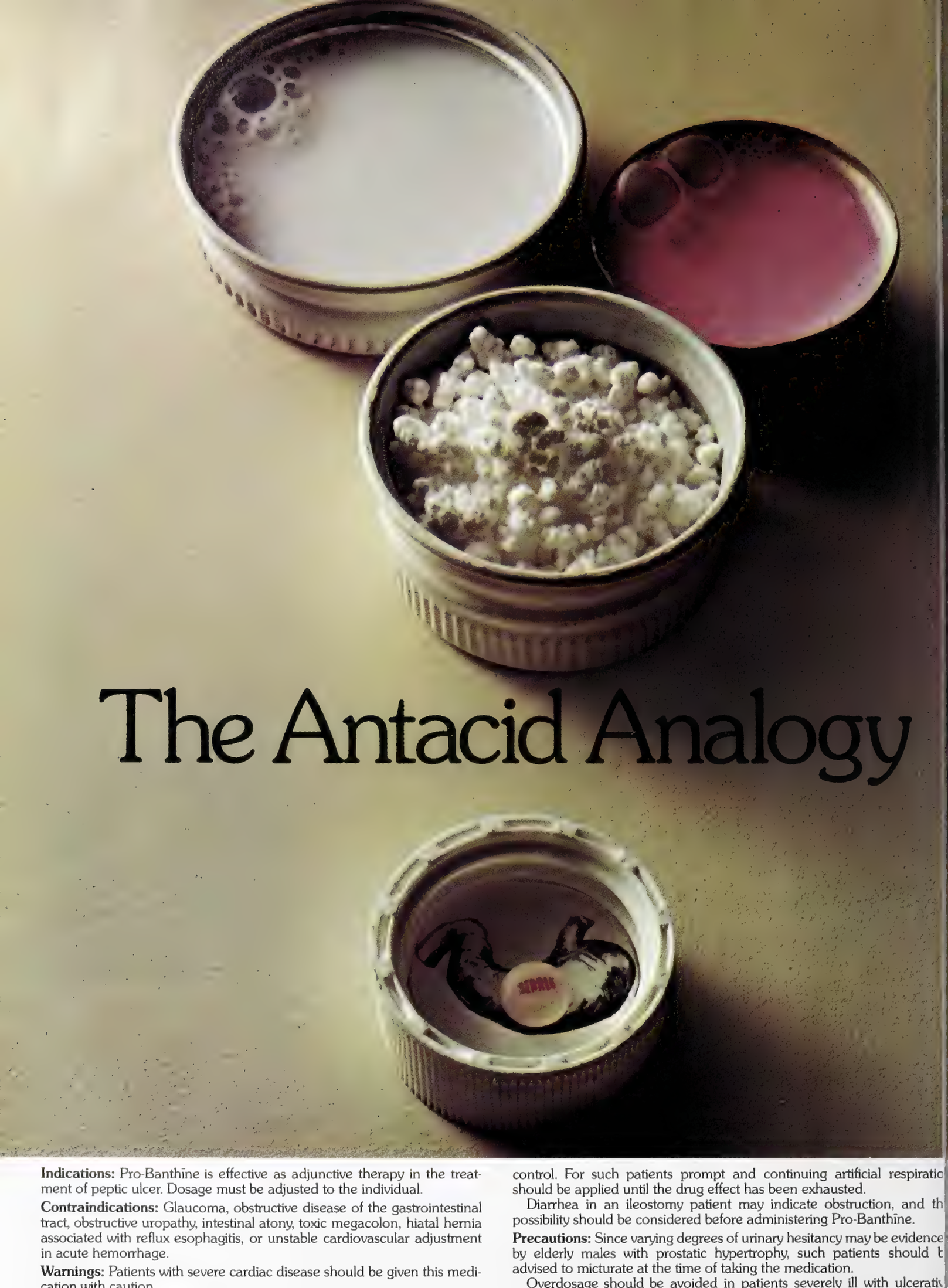

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Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

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ntacids relieve ulcer pain by neutralizing gastric cid. This action is relatively short-lived and they have o other mode of action.

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Pro-Banthine reduces acidity without subsequent acid rebound. The capacity of Pro-Banthine to reduce the secretion of total and free acid in the stomach has been demonstrated in scores of studies. None has demonstrated any significant evidence of acid rebound.

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*Innes, I. R., and Nickerson, M., in Goodman, L. S., and Gilman, A. (editors): The Pharmacological Basis of Therapeutics, ed. 4, New York, The Macmillan Company, 1970, p. 537.

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ccur as well as mydriasis and blurred vision. In addition the following dverse reactions have been reported: nervousness, drowsiness, dizziness, nsomnia, headache, loss of the sense of taste, nausea, vomiting, constipa- on, impotence and allergic dermatitis.

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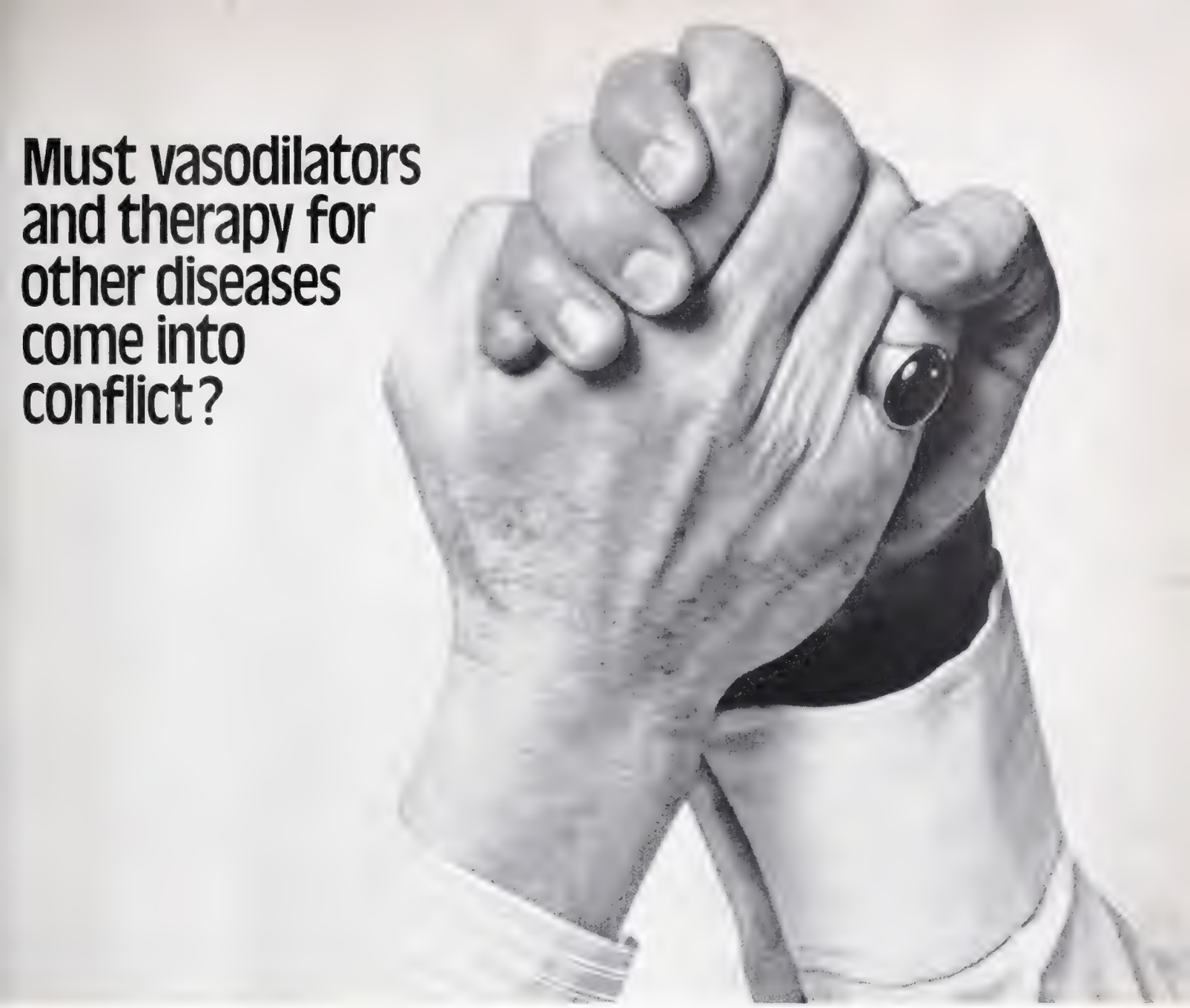

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In fact, there are no known contraindications to the use of Vasodilan in recommended oral doses, other than that it should not be given in the presence of frank arterial bleeding or immediately postpartum.

1. Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
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Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

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Changing concepts in treatment of ruptured omphalocele (gastroschisis)

Leonard Graivier, MD

The treatment of infants born with ruptured omphalocele or gastroschisis is always difficult and often discouraging.[1] Whether the lesion is a herniation of viscera into the base of the umbilical cord and is covered with a membranous sac which later ruptures (omphalocele), or is a full-thickness defect of the abdominal wall next to the insertion of the umbilical cord through which the intestines extrude (gastroschisis), has little effect upon treatment or results.[2,3] In both conditions the exposed bowel is thick-walled, matted together, and edematous. The surgeon has two major problems. The immediate aim is closure of the abdominal wall over a large eviscerated mass of intestines which must be reduced into a relatively small peritoneal cavity. The long-term problem is maintenance of nutrition until the obstructed alimentary tract begins to function. Prior to 1940, infants with either problem usually did not survive. In 1962, Bill stated, "... when the sac has ruptured in utero and the bowel is therefore thickened to three or four times its normal size the outlook is hopeless."[4] In 1973 a survey from the Children's Hospital of Los Angeles reported that during the ten-year period 1960-1970, they had a mortality rate of 65% for gastroschisis and 100% for ruptured omphalocele.[3]

Omphaloceles may be divided into those with either an intact or a ruptured sac. In neonates with an intact sac, the size of the defect and the association of other malformations are the main factors affecting survival. For defects of less than 5 cm in diameter and no other serious anomalies, 90% survival should be obtained with immediate layered closure of the abdomen.[5] Infants with this problem always have associated malrotation of the intestines. For larger intact omphaloceles, primary closure is contraindicated. It will always be possible for the surgeon to approximate the edges of an abdominal wall defect with sutures of sufficient strength in a baby. However, this will be at the expense of diaphragmatic excursion, and hypoxia will ensue. Increased intra-abdominal pressure interferes with inferior vena cava return and leads to circulatory collapse and death of infants who technically survive the surgical procedure.[1,6] Once it has been determined that one-stage closure is not feasible, the two-stage method described by Gross in 1948 is utilized.[7] The sac is covered with skin mobilized from the flanks at the primary operation. Complete repair of the ventral hernia is undertaken at a later date when the peritoneal cavity has sufficiently increased in size. This approach was also applied to the treatment of ruptured omphalocele and gastroschisis.

In 1967 and 1968 two new advances in treatment were recorded. The first was the use of synthetic mesh, by Schuster, to cover the exposed bowel.[8] The following year a method of both maintaining normal nutrition and the demands of growth in the newborn infant by infusion of solutions into a central vein (total parenteral nutrition) was described by Dudrick.[9] The purpose of this report is to describe experiences with nine infants utilizing these techniques.

Treatment

The treatment of ruptured omphalocele or gastroschisis is immediate surgery. The urgency of treatment cannot be overemphasized because exposure of a large mass of intestines to a hostile environment leads to evaporation, serosal drying, and heat loss. The infant responds to a cool environment by increased metabolism and oxygen consumption. Falling core temperature re-

sults in anaerobic metabolism and acidosis.[10] Adequate gastric decompression should be instituted as swallowed air increases intestinal distention. The intestines should be covered with sterile warm saline-soaked sponges. Sterile rubber gloves filled with warm water and placed in contact with the infant can maintain core temperature during transportation. Heat can be conserved by wrapping the baby, sterile saline sponges and warm water-filled gloves in aluminum foil. A sterile transport incubator is necessary for warmth and cleanliness (Fig 1).

X-rays of any kind are contraindicated, unless there is evidence of cardio-pulmonary disease. Blood work should include a complete blood cell count, serum electrolytes, and blood gases. Acid-base status is important as respiratory problems frequently develop in these infants before and after surgery. The infant should be intubated while he is awake, and anesthesia should be administered with a high concentration of oxygen. The baby should be placed on a circulating warm water blanket and the prep solution, 1:1,000 aqueous Zephiran, should be warmed. Lactated Ringer's solution is given during the operation. It is seldom necessary to transfuse these infants, as blood loss is minimal. Silastic-coated Dacron is used for the prosthesis as there is an exposed Dacron cuff which acts as a sewing edge. The umbilical cord is removed and the sheet of silastic is sutured to the full thickness of the abdominal wall around the base of the defect with interrupted 2-0 Tedvek, in a circular manner. With a running suture the mesh is then closed to itself up one side and over the top until the intestines are completely covered.[11] The floppy elongated sac is held upright from the baby's abdomen by a suture placed at its tip, attached to a rubber band, and fixed to the isolette (Fig 2). The sac is covered with triple antibiotic cream (polymyxin B-neomycin-bacitracin) and wrapped in a voluminous sterile dressing (Kling or Curlex). Although some authors recommend a Stamm gastrostomy, I prefer not to introduce another potential source of infection to the abdominal wall. A Repogle sump tube is passed into the stomach and placed on low intermittent suction.

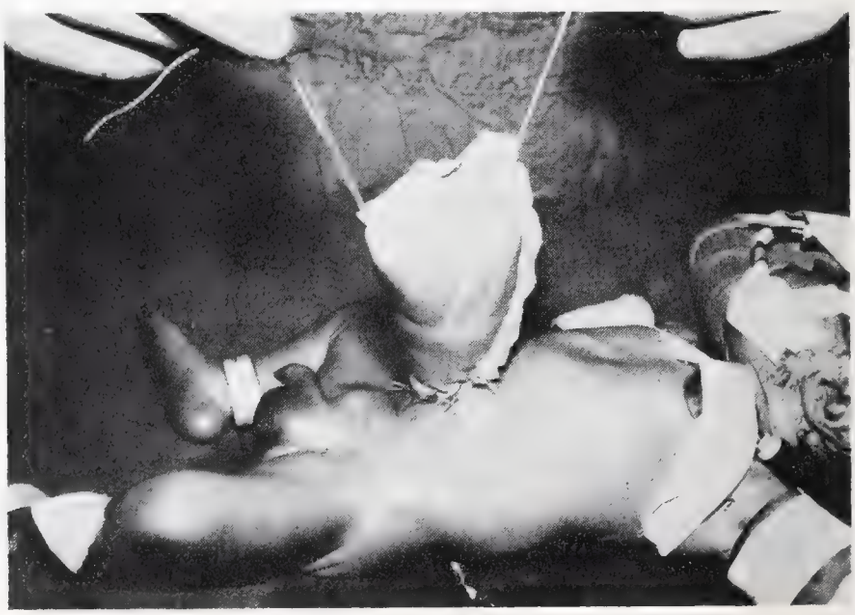
At the time of the first abdominal operation, a silastic atrial catheter with a one-way valve is also inserted through the common facial vein into the internal jugular and positioned in the right atrium. The location of the catheter is confirmed on the operating table by injecting a contrast medium

1. Case 3. Gastroschisis. Note bowel extruded through belly wall lateral to the umbilical cord stump.

and taking x-rays. The catheter is tunneled subcutaneously and exits from the scalp behind the ear. Betadine ointment is applied to the catheter exit site and neck incision, and a dressing is applied. This dressing is changed every 72 hours under sterile conditions, and Betadine is applied at each change. With completion of surgery, the infant is moved to the intensive care unit. Until the contents of the sac have been completely reduced, the baby is maintained on intravenous antibiotics (aqueous penicillin 100,000 units/kg/24 hours, and gentamicin 5 mg/kg/24 hours, given in three divided doses).

Beginning 48 hours after surgery, with the infant wide awake and using aseptic technique, the sac is compressed in the same manner as one rolls up a tube of toothpaste. Usually an inch of sac may be compressed and tied off at each squeeze, as this is about all that the baby will tolerate. Triple antibiotic cream is applied and the sac is redressed. I then squeeze the sac and reduce the viscera every 36 hours after the initial squeeze. Reduction usually is complete between the 7th and 13th days. Twenty-four hours after complete reduction, the infant is returned to surgery. The fascia and peritoneum are closed with through-and-through interrupted 2-0 Tedvek sutures and the skin is closed with Steristrips. *Only the abdominal wall is repaired. It is absolutely contraindicated to attempt to take down adhesions at this operation.* The infant is again returned to intensive care and the following day rectal irrigations of undiluted Gastrografin (10-20 cc once a day) are begun to wash out inspissated meconium plugs. When the baby begins to have spontaneous bowel movements, the nasogastric tube is removed and oral feedings are begun. Only when feedings are tolerated is total parenteral nutrition discontinued. If the baby has not demonstrated an open alimentary tract within two weeks of closure and the abdomen is well healed, is it then proper to operate to both lyse adhesions and correct the malrotation (Fig 3).

A complete discussion of total parenteral nutrition is not within the scope of this report, but a few pertinent facts must be mentioned. Septicemia is the most



2. Case 4. Silastic-Dacron mesh sutured to abdominal wall defect and then to itself to create a sac and cover the exposed intestines.

serious life threatening complication of total parenteral nutrition. The greatest danger is that of fungal sepsis due to *Candida albicans*. Certain guidelines must be adhered to when initiating total parenteral nutrition programs. The procedure is used only if indicated by the patient's clinical requirements, and is done under the responsibility of a team of physicians with a particular interest and expertise in the field. The insertion of a catheter should be considered a surgical procedure and performed in an operating room. The catheter site must be inspected and disinfected every two or three days. Solutions should be prepared and administered according to a detailed protocol incorporating adequate infection control measures. All total parenteral nutrition components and additives should be mixed under a laminar flow hood. Micropore filters must be used in the delivery system and changed every 24 hours. The filters will block virtually all bacteria and fungi, but a pump is necessary to insure the flow of nutritive fluids. The administration of fluid at a particular site must be immediately discontinued if signs of fluid extravasation or inflammation occur.

Results

The two factors that contribute to mortality in this complex problem are selection of inappropriate methods of surgical closure of the defect and sepsis due to abdominal wall infection or *Candida* septicemia. The survival rate in this series of nine patients was 55%. Fig 4 presents the salient features of each case. In analyzing the infants who did not survive, I feel that the first two died because of inappropriate closure of the abdominal defect. In both instances, rather than closing the belly wall, the entire bowel was eviscerated and adhesions were separated. The babies could not tolerate this and died of overwhelming infection. I must again stress that only abdominal wall reconstruction should be done after completely reducing bowel and obliterating the sac. In case 6, the condition was not correctable in that the patient presented with gangrene of the stomach and small and large bowel. A sac was cre-

3. Case 4. Fifteen-day-old infant after complete closure of abdominal wall, ready to go home.

4. Pertinent details of nine cases.

	No./Sex	Age/Weight	Surgery	Reduction of Bowel	Results
1970	1/M	4½ hours 1,570 gm	7/5—Created silastic sac. 7/13—Inserted hyperalimentation catheter. 7/20—Lysis adhesions and correction malrotation. Closure of abdomen.	7/16 11 days	7/20 Necrotizing fasciitis, abdomen. 8/13 Died. Autopsy: Sepsis, due to E. coli.
	2/F	2½ hours 2,098 gm	7/14—Created silastic sac. 7/20—Inserted hyperalimentation catheter. 7/24—Sac separated from abdomen; new silastic sac created. 7/29—Lysis adhesions and resections of 6 in. of jejunum. Closure of abdomen.	7/27 13 days	7/30 Progressive respiratory distress. 7/31 Died. Autopsy: Bronchopneumonia, due to Klebsiella.
1971	3/M	1½ hours 2,670 gm	11/12—Created silastic sac and inserted hyperalimentation catheter. 11/29—Closure of abdomen.	11/25 13 days	12/18 Discharged. 32 days in hospital.
1972	4/M	2 hours 3,120 gm	2/11—Created silastic sac and inserted hyperalimentation catheter. 2/21—Closure of abdomen.	2/18 7 days	2/26 Discharged. 15 days in hospital.
	5/M	3 hours 2,060 gm	7/4—Created silastic sac and inserted hyperalimentation catheter. 7/18—Closure of abdomen. 8/18—Lysis adhesions and correction malrotation.	7/15 11 days	9/21 Discharged. 70 days in hospital.
	6/F	5 hours 3,000 gm	9/17—Created silastic sac and inserted hyperalimentation catheter. (Gangrenous intestinal tract)		9/18 Died 8 hours postoperatively in shock. Autopsy: Hemorrhagic necrosis and gangrene of stomach, small and large bowel.
1973	7/M	1½ hours 2,165 gm	9/24—Created silastic sac and inserted hyperalimentation catheter. 10/1—10 inches leaking necrotic ileum resected. New silastic sac. 10/3—2 ileal perforations, 5 inches ileum resected. New silastic sac. 10/10—4 ileal perforations. Area exteriorized, abdomen closed up to exteriorized bowel. Pathology: Necrotizing enterocolitis.	9/30 6 days	10/23 Cultured Candida from blood. Catheter removed and started on Amphotericin B, IV. 10/25 Died. Autopsy: Candida on tricuspid valve and Candida bronchopneumonia.
	8/M	2 hours 3,100 gm	11/11—Created silastic sac and inserted hyperalimentation catheter. 11/20—Closure of abdomen.	11/17 6 days	12/17 Discharged. 37 days in hospital.
1974	9/F	2 hours 2,500 gm	3/18—Created silastic sac and inserted hyperalimentation catheter. 3/27—Closure of abdomen.	3/25 7 days	4/11 Discharged. 23 days in hospital.

ated and a hyperalimentation catheter was inserted, but she died eight hours later. In case 7 there were three episodes of necrotizing enterocolitis with perforation which required resection and creation of a new sac each time. When the baby's intestinal problem appeared to be under control, *Candida* septicemia developed suddenly, and the patient died of *Candida* tricuspid endocarditis. This entity is so uncommon that the eighth case in the English literature (all in adults) was reported in 1973.[12] It is my feeling that a survival rate of 75% can be attained in infants with this problem. The most recent report in the literature, from the Children's Hospital of Columbus, Ohio, reports 8 of 13 such patients survived (57%); this is not too much out of line with the 55% reported in this series.[10] The three most important points in managing this problem are maintenance of strict sterility, rapid reduction of viscera with only anatomic closure of the belly wall, and total parenteral nutrition of the infant.

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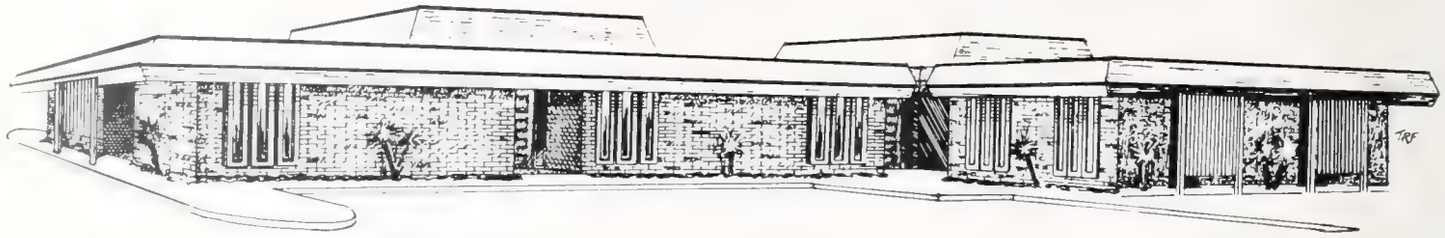

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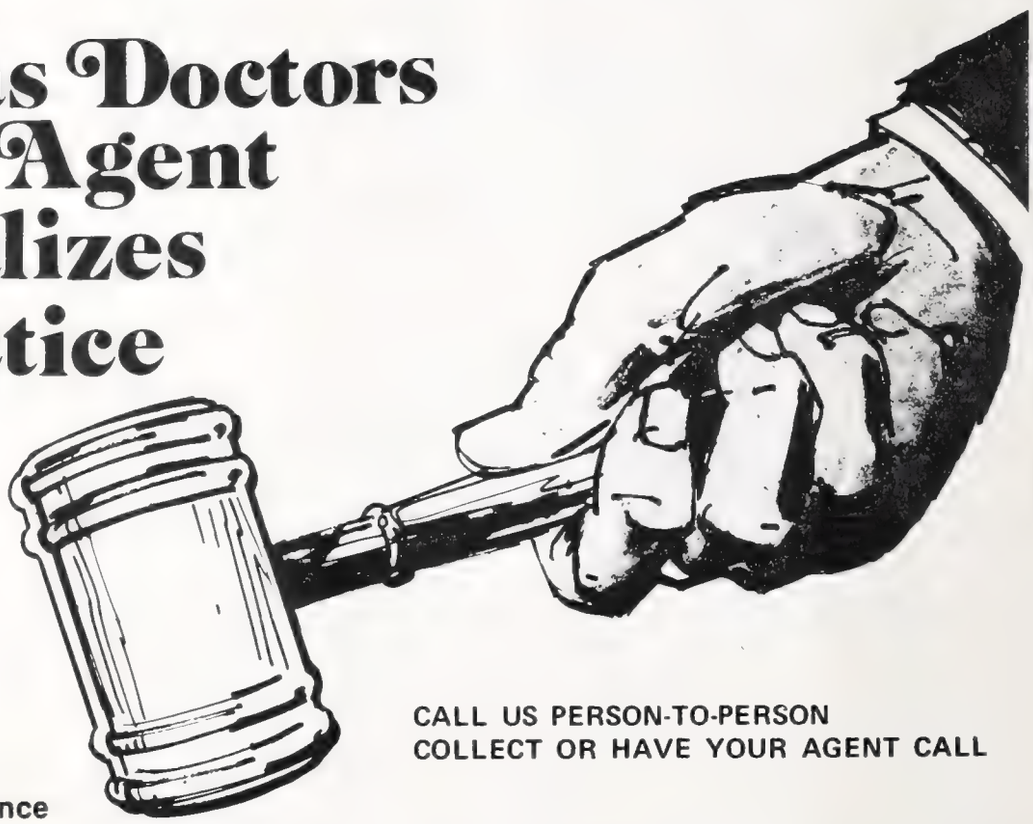

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Prenatal diagnosis in the prevention of genetic disease

R. Rodney Howell, MD; Charleen M. Moore, PhD

A significant portion of children admitted to hospitals today suffer from genetic diseases. In several large pediatric centers this number approaches 25% of all admissions. This does not at all reflect an increase in genetic disorders, but rather the enormous increase in our ability to recognize or diagnose genetic disease. This ability to recognize genetic diseases has rapidly exceeded our ability to cure or treat many of them. Certain treatments of genetic disorders have been quite effective, such as the considerable improvement in the treatment of hemophilia and similar genetic bleeding disorders, the treatment of phenylketonuria, and dietary management of such conditions as galactosemia.

Genetic disease secondary to enzyme deficiencies theoretically can be treated at any of three levels: by correcting the biochemical imbalance, by correcting the enzyme defect directly, or by correcting the gene defect. Actually, it is only the first two of these, and largely the first (that is, correcting the biochemical imbalance) that show any current therapeutic potential.

With the recognition of a large number of enzyme defects and chromosomal abnormalities, there has been growing interest in the prevention of certain of the severe, untreatable conditions. Currently, the only practical way of preventing genetic disorders is through the use of prenatal diagnosis with selective abortion of affected fetuses. This procedure has received attention far beyond what would be predicted based solely on the number of patients who would benefit by it. The enthusiasm has been generated by the fact that certain disastrous disorders can be prevented through the application of this procedure. Currently, the chromosomal disorders and approximately 50 inherited enzyme disorders can be detected prenatally.

History

The first studies relevant to prenatal detection of genetic diseases were performed in 1956, when Riis and Fuchs[13] demonstrated that the cells within the amniotic fluid could be stained for sex chromatin bodies, thus determining the number of X chromosomes. Since this permitted the determination of fetal sex with a fair degree of accuracy, the way was opened toward detecting the sex of the fetus in pregnancies in which there was a significant risk for X-linked disorders, such as Duchenne's muscular dystrophy and hemophilia. Although one could not and cannot today accurately diagnose these conditions enzymatically, identifying a male fetus in a woman at risk for these conditions would give that fetus a 50% risk for having one of these problems, whereas a female fetus would be virtually at no risk.

Ten years later, Steele and Breg[14] asked four important questions that we feel launched the current science of prenatal detection: (1) Does human amniotic fluid contain viable cells? (2) If so, can these cells be grown in tissue culture in sufficient quantity for chromosomal analysis? (3) Are the cells of fetal origin? and (4) Can sex chromatin studies be made more reliable? They demonstrated clearly that the cells in the amniotic fluid were of fetal origin and could be grown in sufficient quantities for karyotypic analysis. At that time, they reported studies on 21 fluids. Sex determination by staining for Barr bodies was correct in all cases. They did notice, however, when trying to culture the cells, that there was an extremely low plating efficiency, which means that roughly about 1 in 1,000 cells seemed to grow. This confirms the observation that most of the cells in amniotic fluids appear to be dead. They were only able to

get successful growth in about 20% of the cultures that were attempted. Since these early observations, there has been a dramatic increase in the ability to cultivate amniotic fluid cells *in vitro*. Nadler[9] and Jacobson[6] in particular have been extremely active in getting prenatal diagnosis established as a useful clinical tool.

Methods of Procedure

Amniocenteses for genetic purposes are usually performed between the 14th and 16th weeks of pregnancy. This timing derives from several considerations: This is a time when the uterus is above the pelvic brim and is of sufficient size to tap transabdominally and to obtain reasonable amounts of fluid for study. Amniocenteses by the vaginal route used in earlier days entailed a considerably greater complication rate than is now the case. The abdomen is prepared as for a surgical procedure, and a 20-gauge spinal needle with stylet is inserted into the uterus transabdominally. The fetal heart rate is monitored before and after the procedure. Some clinics locate the placenta with ultrasound.

After the stylet is withdrawn, the first few milliliters of fluid removed are discarded to minimize the theoretical possibility of contamination with maternal cells. Then 20 ml of fluid are usually removed, and great care is taken to retain sterility en route to the laboratory. The patient usually remains in the clinic for several hours, and is checked periodically before returning home.

We feel quite strongly that all diagnostic midtrimester amniocenteses should be performed by persons experienced and qualified in obstetrics. There are many reasons for this position, but one is most compelling. Implicit in the performance of an amniocentesis is the agreement to perform a therapeutic abortion if an affected fetus is detected. These procedures should be done only by a qualified physician.

Direct Studies on Amniotic Fluid Supernatant

The amniotic fluid supernatant has been useful in the last trimester of pregnancy in determining fetal age (eg, creatinine),[11] and in the management of erythroblastosis fetalis[2] and respiratory distress syndrome.[3] Indeed, great experience has accumulated in third trimester amniocentesis carried out for these purposes. This experience, particularly with regard to complications and long-term follow-up, cannot be applied without caution to midtrimester amniocentesis.

Many chemical constituents have been studied in amniotic fluid samples obtained at earlier stages of pregnancy. For example, we, as well as others, have assessed the amino acid composition and developmental changes that occur during pregnancy.[15] There appears to be free exchange of these low-molecular weight compounds across the placenta, and these materials in amniotic fluid largely reflect maternal environment.

The amniotic fluid supernatant fraction contains many enzyme activities, probably from cellular breakdown as well as fetal urine. In using these activities diagnostically, a problem arises in knowing the basis upon which to express this enzyme activity. No diagnosis can now readily be made, based only on studies of the supernatant. It seems possible, however, that determination of a partial activity, which is part of a total activity, might be useful. For example, in the case of Tay-Sachs disease, the percentage of hexosaminidase that is heat labile (ie, hexosaminidase A) might accu-

rately reflect the fetal genotype. However, diagnosis must not be made on this type of study until it is clearly shown that it is highly reliable.

Direct Studies on Amniotic Fluid Cells

The cells present in amniotic fluid are clearly of fetal origin. They vary in morphology and probably arise from the skin, larynx, and genitourinary and gastrointestinal tracts. The percentage of orange-staining cells with fat stains (which are lipid-containing cells from sebaceous glands) is useful in assessing fetal maturity.[1,4]

In 1956, Riis and coworkers[13] first showed that sex chromatin bodies could be observed in human amniotic fluid cells. Steele and Breg[14] later carried out studies to see if sex determination could be accurate based on sex chromatin analysis. With carefully-defined criteria, sex determination was accurate in all 21 of their cases. Jacobson and Barter[6] performed 71 correct sex determinations out of 75 cases studied (about 95% accuracy).

The decisions based on these studies demand absolute accuracy. The intrauterine diagnosis of fetal sex, upon which data the decision to abort or not to abort is made, must not, therefore, be based on sex chromatin analysis alone. Culture of the cells with chromosome analysis is indicated.

Amniotic fluid cells, when tested directly, have many enzyme activities present. Nadler and Garbie[19] reported 12 such enzyme activities. Since the number of viable cells is quite variable, the total enzyme activity is likewise quite erratic. Additionally, greatly diverse enzyme activities might be expected in various cell types. It is difficult, therefore, to use enzyme activity of the uncultured cells directly, since it cannot be reliably based on protein, DNA content, or other usual parameters, unless, as exemplified by Tay-Sachs disease, diagnosis relies not on total enzyme activity, but on the percentage of a certain fraction of the total activity.

At the present time, however, all diagnoses, either based on sex determination, chromosome analysis, or enzyme studies, must be obtained finally from cultivated amniotic fluid fibroblasts.

Studies on Cultivated Amniotic Fluid Cells

Well over 1,500 amniocenteses have been done in order to monitor pregnancies at risk for genetic disease. The number of amniocenteses carried out in North America thus far and the types of genetic indications to which prenatal diagnosis can be applied are outlined in Fig 1. Although techniques vary somewhat, experienced personnel now culture amniotic fluid cells with success rates approaching 100%.

Chromosomal Studies

By far the largest number of amniocenteses has been done on women at risk for cytogenetic abnormalities: women over 35 or 40 years of age, women with previous children having Down's syndrome or other chromosomal trisomies, and known carriers for chromosomal translocations. It is clear that the amniotic fluid cells reflect the fetal genotype, and relatively few cells are required for karyotyping. An example of a karyotype prepared from amniotic fluid cells is shown in Fig 2. This is a karyotype of a normal male fetus of a mother carrying a 13/15 Robertsonian translocation. The chromosomes have been treated with trypsin and stained with Giemsa's stain to pro-

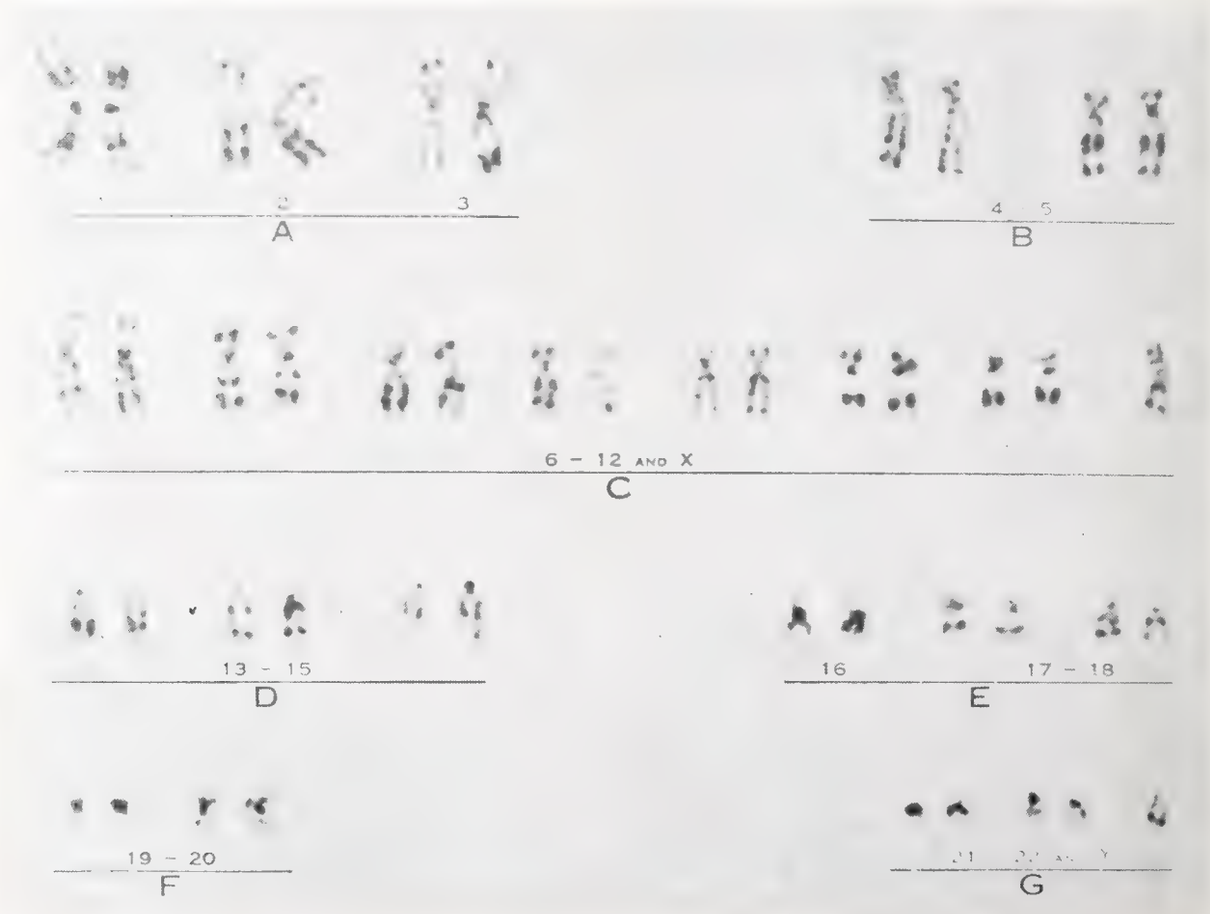
Genetic Indication	No. Diagnoses	No. Abnormal Fetuses
Chromosomes		
Previous child with Down's syndrome	485	5
Maternal age (years)		
40 to 44	347	9
35 to 39	255	4
Translocation carrier	93	17
Other	188	1
X-Linked conditions	115	54 (males)
Metabolic disorders (see Fig 4)	180	37
Totals	1,663	127

1. Results of prenatal diagnosis by amniocentesis in North America.[17]

duce G-bands. This banding pattern is unique for each chromosome and allows for accurate identification of every chromosome in the karyotype. The accuracy and reliability of chromosomal analysis on cultured amniotic fluid cells approach 100% in laboratories with experienced personnel.

The question of which pregnancies should be considered for midtrimester amniocentesis because of advanced maternal age can be discussed on the basis of the relative incidence of mongolism at various maternal ages[12] and the number of total births by maternal age.[16] The exact risk of amniocentesis is not known, but it is

2. Karyotype of a normal male prepared from cultured amniotic fluid cells and stained to show G-bands. This new staining technique permits absolute identification of every chromosome in the karyotype.



reasonable to assume that all risks due to the amniocentesis procedure are at the 1% level.

From Fig 3 it can be estimated that 290 amniocenteses must be performed to detect one affected fetus with Down's syndrome when the mother is 35 to 39 years of age. This shows that the risk of the amniocentesis may be greater than the risk of having a mongoloid child for this class of mothers. We think the potential risk to the 289 normal pregnancies is unwarranted, and doubt that the capability currently exists to carry out more than 300,000 amniocenteses per year to cover this group. We also calculate that the cost in dollars (the cost in suffering cannot, of course, be calculated) would be considerable, around $72,500 per case identified in this group. But, obviously, in selected situations, the woman age 35 to 39 years of age may be a likely candidate for this procedure.

We recommend, in general, that the pregnant woman over age 40 is an appropriate candidate for amniocentesis on the basis of age alone. Down's syndrome occurs in over 1% of these pregnancies (see Fig 3), which is probably greater than all risks involved in amniocentesis. The cost per fetus detected is more reasonable for this group of women, and the number of amniocenteses required is dramatically less, although still enormous (more than 70,000 per year). Even a more conservative position would permit amniocentesis in women over age 45 where the risk for mongolism exceeds 2% of all births, and the number of total births is relatively small. Again, each pregnancy must be considered individually.

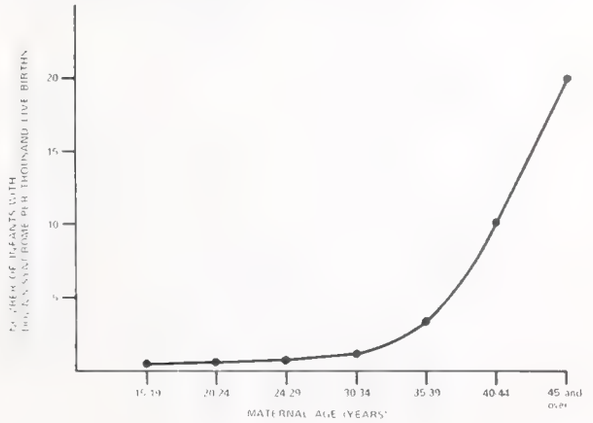
If all women over age 40 had an amniocentesis with chromosomal analysis and abortion of affected fetuses, the incidence of Down's syndrome would be reduced by 20% (Fig 3). Such a procedure would have major impact in this frequent, severely handicapping condition.

Biochemical and Enzymatic Studies

Krooth and Weinberg[8] showed in 1961 that skin fibroblasts developed from patients with galactosemia were unable to utilize galactose *in vitro*. Krooth et al[7] later directly demonstrated the first enzyme deficiency in fibroblasts grown from a skin biopsy of a patient with a deficiency of catalase. These authors further showed that fibroblasts from a carrier with acatalasia had intermediate activity, suggesting strongly that the three genotypes of normal, carrier, and affected could be identified *in vitro*.

There are over 50 distinct disorders in which an enzyme deficiency can be demonstrated in cultivated skin fibroblasts derived from the affected patients. In all instances, where appropriate study has been carried out, these disorders have been or can likely be detected prenatally in cultured amniotic fluid cells. A list of the metabolic diseases which have been or likely can be detected *in utero* is shown in Fig 4. In order for prenatal diagnosis to be per-

3. Incidence of Down's syndrome (mongolism) as a function of maternal age.



Lipid Storage Diseases
Fabry's disease
GM_1 gangliosidosis (generalized gangliosidosis)
GM_2 gangliosidoses (Tay-Sachs disease, Sandhoff's disease)
Gaucher's disease
Krabbe's disease
Metachromatic leukodystrophy
Niemann-Pick disease
Refsum's disease
Mucopolysaccharidoses
Hurler syndrome
Hunter syndrome
Sanfilippo syndromes (A and B)
Scheie syndrome*
Maroteaux-Lamy syndrome
Disorders of Purine-Pyrimidine Metabolism
Lesch-Nyhan syndrome
Hereditary orotic aciduria
Disorders of Carbohydrate Metabolism
Galactosemias*
Galactose-1 phosphate uridyl transferase deficiency
Galactokinase deficiency
Glycogen storage disease
Type II (Acid maltase deficiency)
Type III (Debrancher deficiency, certain subgroups)*
Type IV (Brancher deficiency)
Type VIII (Phosphorylase b kinase deficiency)*
Disorders of Amino Acid Metabolism
Cystinosis
Homocystinuria
Argininosuccinicaciduria
Citrullinemia
Hyperammonemia (certain types)
Hyperlysinemia
Maple syrup urine disease
Methylmalonic aciduria
Cystathinoninuria
Miscellaneous Lysosomal Disorders
Fucosidosis
Mannosidosis
I-Cell disease
Acid phosphatase deficiency
Wolman's disease
Miscellaneous Disorders
Xeroderma pigmentosum
Congenital erythropoietic porphyria
Acatalasis*

*Prenatal diagnosis will not likely be used, as disease is mild or satisfactory treatment is available

4. Genetic metabolic diseases that have been or can likely be diagnosed in utero.

formed for a metabolic disorder, the following situations must exist:

1. The physician must be absolutely certain that the family is at risk for producing an infant with the defect for which he is monitoring; that is, the diagnosis must be unambiguous.

2. Cultivated fibroblasts from patients with the disorder under study must be shown to contain an unambiguous abnormality. Examples of this would be a specific enzyme defect, abnormal sulfate incorporation (as in the mucopolysaccharidoses), or cystine accumulation (as in cystinosis). Such parameters as metachromasia are not sufficiently reliable to be used as a basis for decision-making.

3. The carrier (heterozygote) must be differentiated from the affected. Otherwise, 75% of all pregnancies at risk for autosomal recessive disorders will be aborted.

4. The activity of the enzyme (or other parameter) being studied must be well-characterized in the laboratory doing the diagnostic amniocentesis in cultivated amniotic fluid cells of normal pregnancies at the appropriate gestational age; eg, 14 to 16 weeks.

5. The patient being studied must desire a therapeutic abortion if an affected fetus is found. Otherwise, the study serves little purpose and produces potential risk, albeit small. We do not think it reasonable for parents to "guarantee" they will have a therapeutic abortion if an affected fetus is found.

Other Areas for Future Development in Antenatal Detection

Hollenberg et al[5] have shown that small amounts of fetal blood, when incubated *in vitro,* produce not only fetal hemoglobin, but also detectable adult hemoglobin.

Therefore, if fetal blood were safely available, sickle cell disease and other hemoglobinopathies could be detected *in utero*. Fetal blood could also be used in determining the karyotype of the fetus without the risk of contamination by maternal cells. In the same light, if fetal skin were available, biochemical assays could be done on fibroblasts grown from a fetal biopsy in tissue culture for identification of enzymatic defects. Currently, no method for obtaining fetal blood or skin in early pregnancy is available. However, by using a newly-developed tool, the amnioscope, this may be possible in the near future.

The ability to view the fetus in the amniotic sac is also being developed at the present time with the amnioscope. This can have great effects in several areas. Major structural defects, such as spina bifida, present a troublesome problem. The low recurrence risk, even in families who have produced one handicapped infant, makes many procedures untenable. It is certainly improper to x-ray a large number of normal fetuses, searching for the rare affected one. For instance, it is not appropriate to expose 49 normal fetuses of women with previous infants with spina bifida in order to detect one affected infant. But the development of fetoscopy, using an instrument which utilizes fiber-optics and is inserted into the amniotic sac transabdominally, will allow identification of affected fetuses with very low risk. The amnioscope is being used now only on pregnancies that are to be terminated soon after the procedure, but certainly in the future we shall see this technique safely used for prenatal diagnosis. Identification of fetuses with rare single gene defects, which are undetectable enzymatically, may also be possible with fetoscopy, if the gene defects are associated with some well-defined physical abnormality such as polydactyly in the Ellis-van Creveld syndrome. Other approaches to these problems in the future may be in the use of genetic linkage studies and nonintervention techniques.

Risks, Problems, Philosophies

Prenatal diagnosis and selective abortion are extremely important techniques for the individual family who has had a child with a serious, fatal, untreatable disease, or is at risk for producing one. Many families who have had one such child, for example with Tay-Sachs disease or cystinosis, will not have additional children, although they greatly desire children of their own. However, with the assurance that their next child will not be affected similarly, many of these families will plan additional children.

Prenatal diagnosis is not an advance in fundamental knowledge, and we consider it an interim technological advance. Basic processes are not altered by prenatal diagnosis; rather, the affected fetus is selectively aborted.

When a family is identified as being at risk for a genetic disease, we feel that prenatal diagnosis should be only one option made available. Equally strong cases can and should be made for adoption and artificial insemination.

Summary

Prenatal diagnosis of chromosomal and many enzymatic-metabolic diseases is now possible, with very low apparent risk. The use of this technique will have major impact on certain of the severely handicapping and untreable conditions. For example, if all pregnant women over 40 years were to have an amniocentesis, with selec-

tive abortion of the affected fetuses, about 20% of the cases of Down's syndrome, a leading cause of severe retardation, could be prevented.

Amniocentesis must be planned well in advance, and the studies on the fluid must be carried out in a smoothly operating, specialized laboratory highly experienced in amniotic fluid culture and study. When a family is identified as being appropriate for amniocentesis, the physician should work with one of the major laboratories involved in amniocenteses and together they should plan carefully for all procedures. Although the risks are low, significant ethical problems exist for some families.

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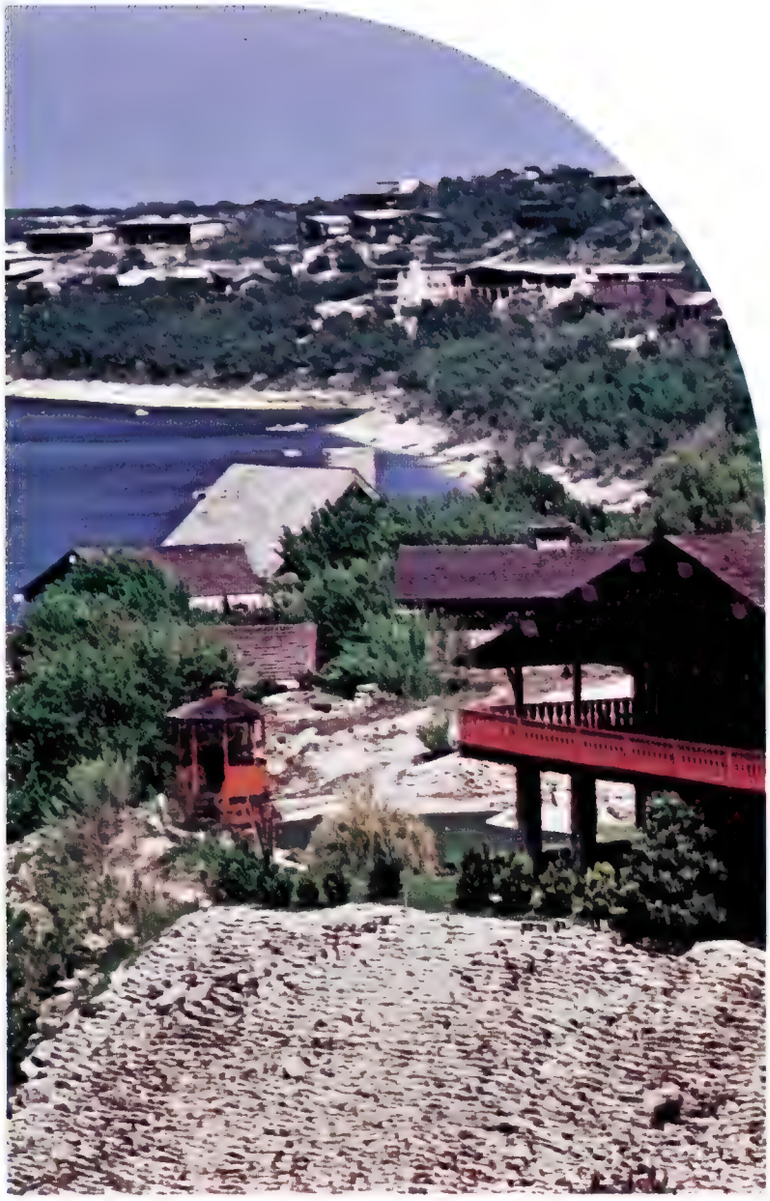

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item:	**Breast cancer is a major concern of American women, according to a recent Gallup study conducted for the American Cancer Society.**
item:	**Although aware that early discovery improves the chances of cure, and that BSE can lead to early discovery, *fewer than 1 in 5* women practice BSE, and *only half* have an annual breast examination by a physician.**
item:	**Only 35% of all women polled reported that a *physician* had ever raised the subject of breast self-examination, and only 24% had received instruction from the physician on how to do it. Even among women who regularly see a gynecologist, only 34% had been instructed on BSE.**
item:	***But,* among women who received personal instruction from their physicians, the overwhelming majority *(92%)* practiced BSE during the preceding year.**

The Gallup study revealed that, far more important than increasing awareness of breast self-examination, is the problem of inducing women to practice it regularly. The physician plays a key role in this—by teaching women the correct technique, and instilling in them the confidence that will assure their continued practice of BSE.

The American Cancer Society gives major emphasis to breast cancer through research and a vast array of public educational materials, designed to give women life-saving information about the disease. Our latest approach is via a pioneering television film starring Jennifer O'Neill, "Breast Cancer: Where We Are." Where we *will* be in a few years will certainly hinge on our joint efforts.

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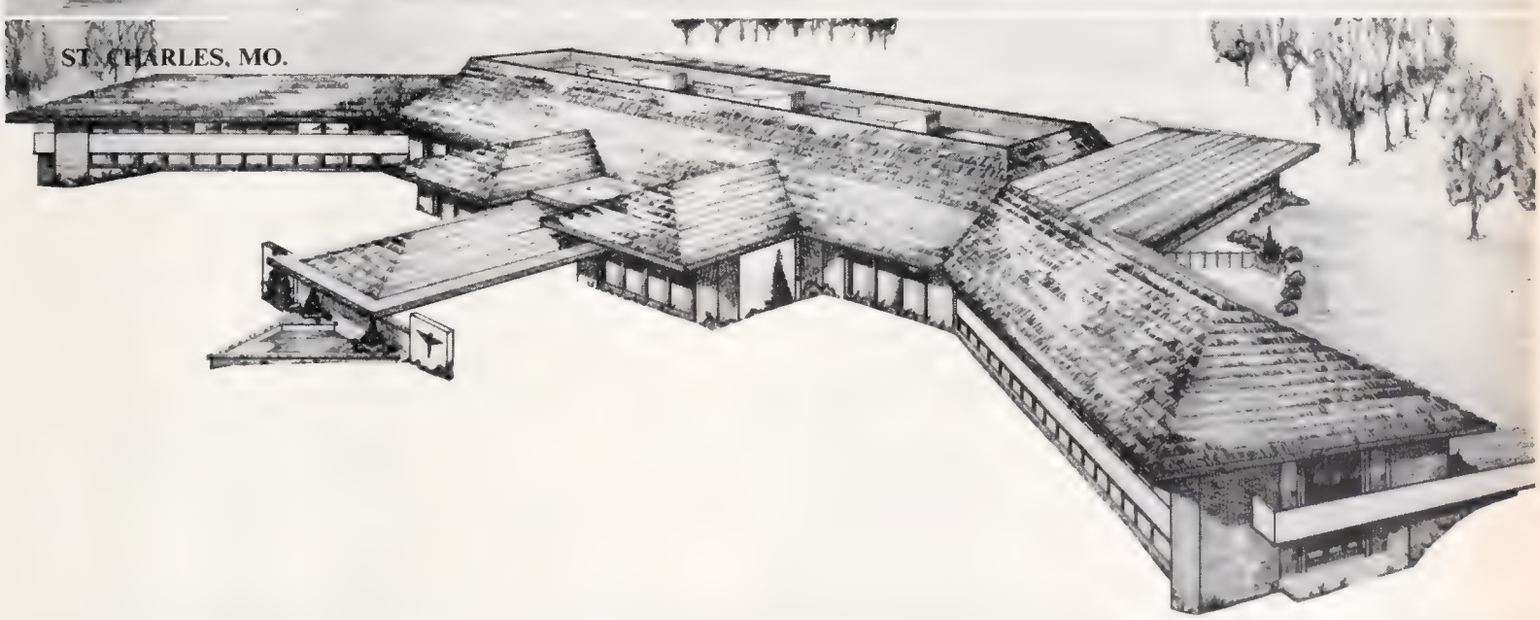

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Early treatment of blunt chest trauma

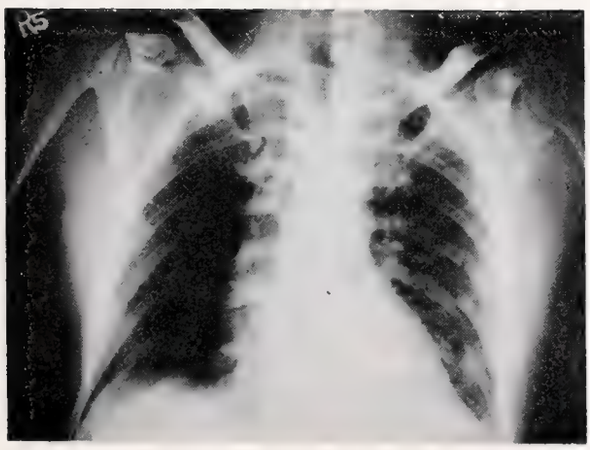
B. J. Jarem, MD; John A. Jenicek, MD

Blunt chest trauma, as usually sustained in the steering wheel-dashboard type of accident and also described as "crushed chest" or "flail chest," has been discussed in multiple reports. While almost every organ in the chest, mediastinum, or upper abdomen can be injured in these accidents, most commonly involved are the thoracic cage, lungs, and pleura. The management of patients with this type of injury has changed appreciably since the classic report of Avery et al (1956),[1] which described treatment by internal splinting of the chest—ie, positive pressure delivered by a mechanical ventilator, rather than external fixation by means of towel clips or other devices. In addition to the widespread use of mechanical ventilators, ancillary therapy is evolving which significantly decreases mortality and shortens convalescence. Recently we have treated several patients who presented with blunt thoracic trauma. Their rapid and uneventful recovery following the prompt institution of such "supportive" therapy illustrates the benefits to be gained.

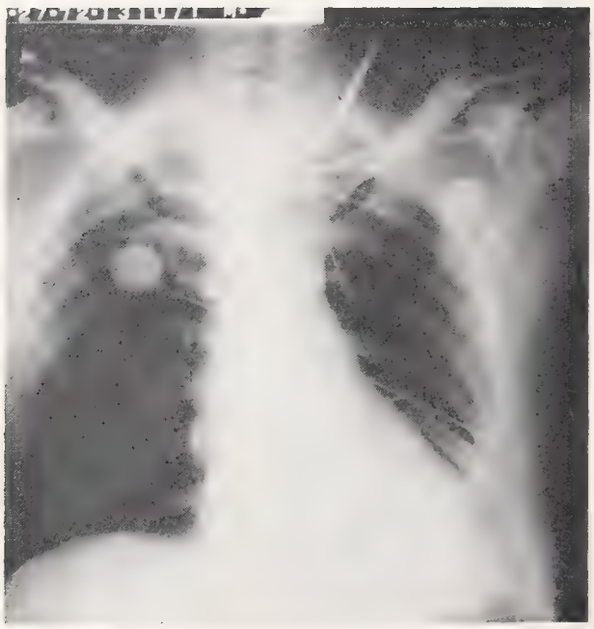
Case Reports

Case 1: A 59-year-old male, who was a passenger involved in an automobile accident, was brought to the emergency room, where roentgenograms of the chest (Fig 1) revealed multiple rib fractures. Involved were the left sixth through tenth ribs posteriorly. There was decreased excursion of the left chest wall. A nasotracheal tube was inserted, and ventilation with a Bird Mark VIII ventilator was instituted prior to transferring the patient to the general intensive care unit. Roentgenograms of the chest four hours later (Fig 2) revealed significant malalignment of the rib fractures, and it was felt that this thoracic injury would be splinted better by utilizing controlled volume ventilation with positive end-expiratory pressure (PEEP). Accordingly, an Ohio 560 ventilator was substituted for the Bird unit and 8 cm of PEEP was applied. Methylprednisolone, 30 mg/kg of body weight, was given upon initiation of mechanical ventilation, then repeated in four divided doses during the next 24 hours. Small doses of morphine

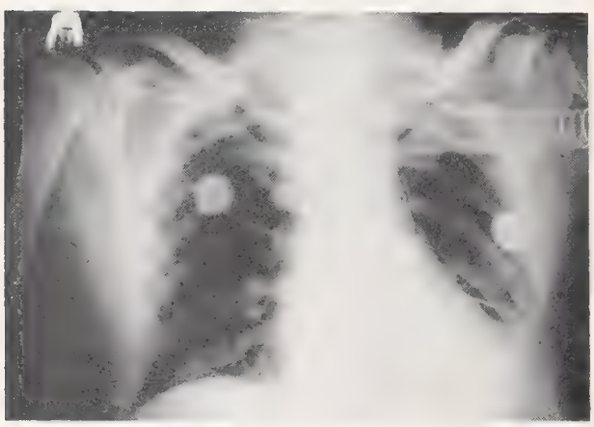
1. Case 1. Roentgenogram of chest taken on admission showing fractures of sixth through tenth ribs on the left side posteriorly.



2. Case 1. Four hours after admission. The rib fractures are much more evident, with malalignment of fracture ends noted.



3. Case 1. Six days after injury. Tracheostomy tube is in place; patient is on mechanical ventilation. Alignment of the fractures is well preserved. The left lung base shows resolving infiltrate with pleural effusion. The chest tube still is in the pleural space.



4. Case 1. Eleven days after injury. The patient is off the positive-pressure unit. X-ray shows nebulizer tubing. Note good alignment and apposition of fracture ends. The chest tube is still in place.

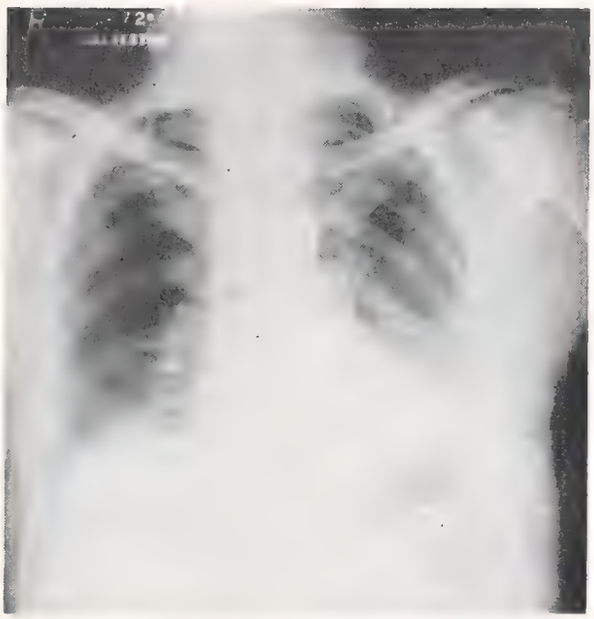
(2-4 mg) and curare (6-9 mg) were administered intravenously at alternate two-hour intervals to completely suppress spontaneous respiratory efforts. Sixteen hours after injury there was a sharp drop in the patient's arterial oxygen tension from approximately 130 to 80 mm Hg, and a repeat roentgenogram showed granular homogenous opacification of the entire left lung; this was considered to be a late manifestation of pulmonary contusion. Pleural effusion also was evident. The opacification cleared and the blood gas profile returned to normal over the next 24 hours. On the third day after injury, a tracheostomy was performed in anticipation of a prolonged period of intubation, and on the fourth day a hemothorax on the left was drained uneventfully with tube thoracostomy. Positive end-expiratory pressure (PEEP) was discontinued gradually on the sixth day, and the patient was allowed to initiate inspiration (Fig 3). On the seventh day, an initial weaning trial revealed no evidence of a paradoxical chest movement or respiratory distress, and ventilator support was gradually discontinued (Fig 4). The remainder of the patient's hospital stay was uneventful (Fig 5).

Case 2: A ten-month-old infant was brought to the emergency room after an automobile accident. Respiratory distress was evident. The roentgenogram of the chest (Fig 6) showed obvious fractures of multiple ribs on the left side. On the basis of the obvious respiratory distress, roentgenogram, and decreased arterial oxygen tension, the decision was made to institute ventilator support. The infant was intubated via the nasal route and ventilation with an Emerson unit was maintained for three days. Methylprednisolone, 30 mg/kg body weight, was given following admission. The initial trial of weaning after three days was successful, and the tubes were removed. Convalescence was uneventful.

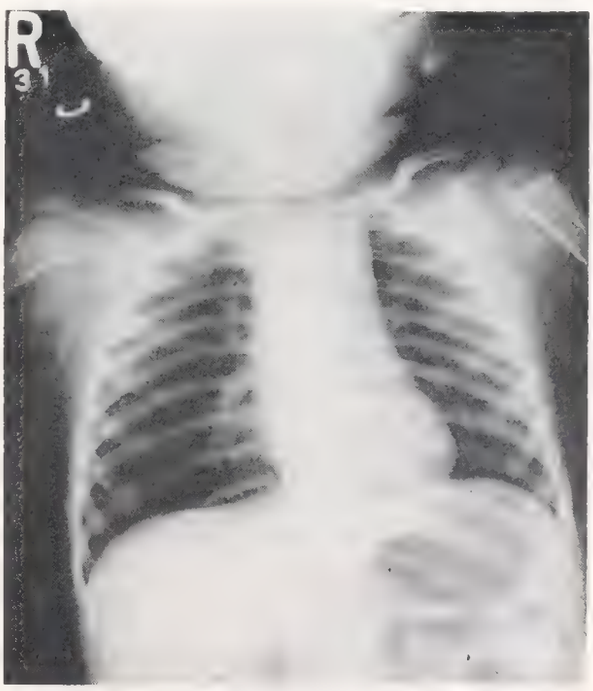
Case 3: A 21-year-old male was seen in the emergency room following an automobile accident. There was obvious paradoxical movement of the right anterior chest wall with considerable respiratory distress. Blood gas determination revealed decreased arterial oxygen tension; roentgenogram of the chest (Fig 7) showed multiple rib fractures corresponding to the area of paradoxical movement. There were no other major injuries. A nasotracheal tube was inserted and ventilation with a Bennett MA-1 ventilator began; PEEP was added after a few hours, and resulted in improved arterial oxygenation. Methylprednisolone, 30 mg/kg body weight, had been given on arrival. On the second day, PEEP was gradually discontinued and the patient was weaned on the fifth day (Fig 8). No paradoxical movement was noted, and the tubes were removed. Again, recovery was uneventful.

Case 4: A three-year-old girl sustained thoracoabdominal injuries when she fell out of the car. X-rays on admission revealed bilateral pneumothorax and pneumoperitoneum. Because of the latter finding, and evidence of hypovolemia, a ruptured viscus was suspected. Bilateral chest tubes were inserted and blood and fluids were administered to stabilize the patient's condition. Early respiratory distress became evident about three hours after injury. Laparotomy revealed no abnormalities, and it was concluded that the air in the peritoneal cavity had dissected down from the pleural spaces.

Postoperatively the patient was ventilated via a nasotracheal tube with a BABY bird ventilator, using 8 cm of PEEP. Methylprednisolone, 30 mg/kg body weight, in divided doses had been administered following admission. Sedation was achieved with morphine (1-2 mg) and Droperidol (2 mg).

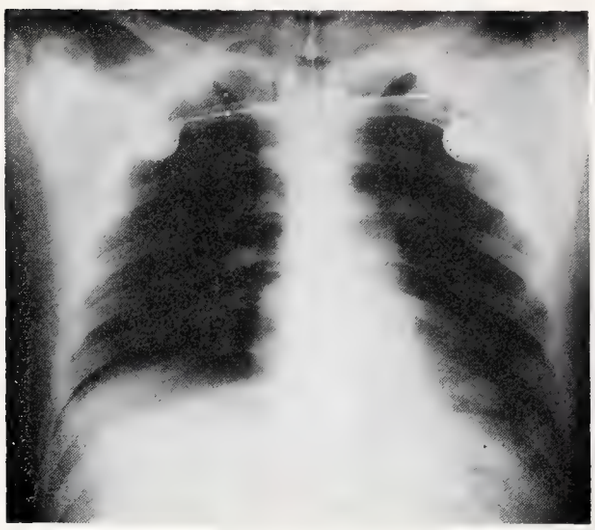


5. Case 1. Thirteen days after injury. The chest tube is out, and pleural thickening and fluid in the left base are resolving.



6. Case 2. Admission roentgenogram of the chest was read as fractures of the left 7-12 ribs posteriorly.

7. Case 3. Fractures of first four ribs anteriorly on the right. This was the area of "flail" or paradoxical movement when the patient was first seen.



8. Case 3. Two days following injury. Nasotracheal tube is in place; fracture of the first rib is more evident.

On the second day, roentgenograms revealed fractures of at least six ribs on the right side, which had not been evident on admission films. On the third day, a brief trial of spontaneous breathing revealed marked flail movement of the upper right area of the chest, and controlled ventilation with PEEP was promptly resumed. On the fourth day, new chest tubes were inserted; during this procedure, ketamine was utilized for anesthesia because the patient had persistent small pneumothoraces. On the fifth day the patient was weaned from the ventilator uneventfully. Hoarseness and croupy cough persisted for more than a week, but eventual recovery was complete.

Discussion

These four cases illustrate our approach to the patient with blunt chest trauma: they were selected as being representative because the patients had no other major injuries. Those patients sustaining penetrating thoracic injuries, associated abdominal injuries, shock, and who have the superimposed insult of operation and resuscitation with large volumes of blood and fluid present a far more complex problem, although our treatment of the pulmonary condition basically remains the same. Detailed pathophysiological findings in chest trauma have been discussed in several complete reviews,[2-6] but a few points deserve reiteration. For flailing or paradoxical movement to occur, the thoracic cage must be disrupted along two points of its circumference. If multiple rib fractures are evident on x-ray, a diligent search should be made for an associated injury, such as costochondral or costovertebral separation or sternal fracture, which might not be evident radiologically. An analogy can be made here to another bony structure, the pelvis, which

commonly is disrupted along two points of its circumference, the second point being a less evident sacroiliac separation or symphysis pubis disruption. Paradoxical movement need not be evident initially; only after decreased compliance forces the patient to generate increasingly negative pleural pressures will it become evident.

Although "flailing" has been emphasized as a prime mechanism of ventilatory failure following chest injury, an equally important but more subtle injury is pulmonary contusion, which often is not evident for hours or days. If appropriate ventilatory support is withheld until the contusion results in obvious respiratory distress, the condition becomes much more difficult to treat and morbidity and mortality may be high.

One should have a high index of suspicion in those patients sustaining blunt abdominal trauma; a force sufficient to produce hepatic or splenic injury often will produce an associated pulmonary contusion. Likewise, in patients sustaining injury which is primarily musculoskeletal in nature (for example, pedestrian-automobile accidents or falls from a height) pulmonary contusion may become apparent after many hours. In suspected cases, the most sensitive parameter to monitor is the arterial oxygen tension.

Pain associated with rib fractures may be another serious impediment to ventilation. Another is decreased pulmonary compliance, regardless of its cause.

The chief method of treating severe cases of respiratory failure is mechanical ventilatory support. Pontoppidon,[7] in a recent comprehensive review, lists broadly accepted indications for instituting mechanical ventilation with which we entirely agree (Fig 9). In addition, if doubt exists as to the need for mechanical support, we elect to institute such support promptly. Watchful waiting often becomes procrastination, while the patient's condition continues to deteriorate.

We have been most impressed with the benefits of PEEP in the treatment of selected cases of adult respiratory failure, and we have extended indications for it to include all cases of blunt chest trauma in which ventilation is given.[8] Patients who are managed with PEEP and are allowed to initiate inspiration or "fight" the ventilator generate very high intrapleural negative pressures, aggravating an existing unstable chest condition and precluding early stabilization of their injury. Consequently, when we elect to use PEEP, we administer sufficient sedation and/or muscle relaxants to depress all spontaneous respiratory efforts, allowing completely controlled ventilation.

While it is generally agreed that a volume-limited ventilator is favored in such cases, in our fourth case we chose to use a time-cycled pressure limited unit (BABY bird). We feel that a unit such as this—especially designed to provide miniature tidal volumes, providing easy control of inspired oxygen concentration fraction, variable humidity, and ease of PEEP application—is the ventilator of choice in pediatric patients.

The use of corticosteroids in the treatment of pulmonary injury is becoming more common. Although clear-cut evidence of the benefits of these agents is still lacking, we have been sufficiently impressed by recent reports and by our own clinical experience that we employ these agents in the majority of patients who require prolonged mechanical ventilation due to pulmonary insufficiency. The use of maximal doses and the rationale of the use of methylprednisolone in preference to other available preparations is summarized by Wilson.[9]

Data	Normal Range	Tracheal Intubation & Ventilation Indicated
Mechanics:		
Respiratory rate	12-20	> 35
Vital capacity (ml/kg of body weight*)	65-75	< 15
FEV_1 (ml/kg of body weight*)	50-60	< 10
Inspiratory force (cm H_2O)	75-100	< 25
Oxygenation:		
PaO_2 (mm Hg)	35-45	> 55‡
$P(A\text{-}aD)O_2$ 1.0 (mm Hg‡)	25-65	>450
Ventilation:		
$Paco_2$ (mm Hg)	100-75 (air)	< 70 (on mask O_2)
V_D/V_T	0.25-0.40	>0.60

*"Ideal" weight is used if weight is grossly abnormal
†After 10 minutes of 100% oxygen
‡Except in patients with chronic hypercapnia

9. Guidelines for instituting mechanical ventilation.[7]

The use of controlled ventilation in patients who have been given sedatives and/or curare is a procedure not to be undertaken lightly; the consequences and potential complications should be well appreciated, and highly skilled nursing care is mandatory. The monitoring facilities and environment of an intensive care unit are essential.

Summary

Blunt chest trauma with associated respiratory insufficiency is commonly encountered in patients involved in automobile accidents or sustaining falls or crushing injuries. Current therapy for more severe forms of such injury involves use of a mechanical ventilator. The concomitant use of positive end-expiratory pressure (PEEP) and very high doses of corticosteroids can contribute to shortening convalescence and improving survival.

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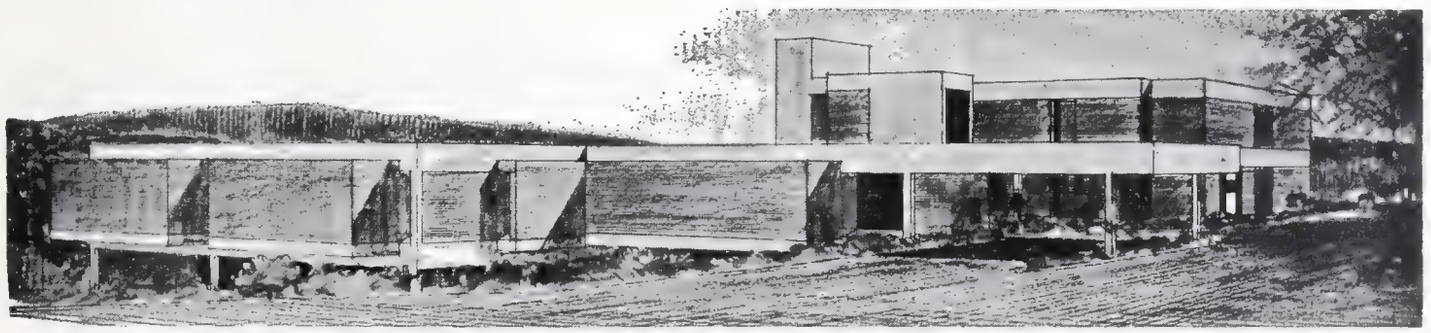

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Dr. Ed W. Schmidt-- new TMA president

Community physician, state medical leader, town mayor, pilot, civic participant, outdoorsman. These are a few of the hats worn by the new president of the Texas Medical Association, Dr. Ed W. Schmidt of Pecos.

An easy-going smile betrays strong convictions on medical issues and a deep belief in the private enterprise system of American medicine. Of his upcoming term, Dr. Schmidt said, "I should like to emphasize two areas of major activity during the year—resisting the obvious efforts of federal intrusion in medical affairs such as patient care, and developing a system of health education for the public."

Dr. Schmidt has predicted medicine's major challenge during the next year to be the increased establishment of federal mechanisms to control the practice of medicine, such as health maintenance organizations (HMOs), professional standards review organizations (PSROs), and attempts to control the cost of medical care by limiting the care permitted to each patient. As for TMA's role in meeting this challenge, Dr. Schmidt stated, "We must cooperate where necessary, but not surrender."

Leadership has marked Dr. Schmidt's life. Born and raised in Malone, Tex, Ed Schmidt was salutatorian of his high school class. His education continued at Baylor University where he received a BA degree. He participated in numerous social and academic endeavors in college in addition to his multiple majors of chemistry, biology, and German. Following his graduation from the University of Tennessee Medical School in 1945, he completed his internship at Toledo Hospital, Toledo, Ohio. He subsequently attended the US Air Force School of Aviation Medicine and the Wayne University School of Occupational Health. Dr. Schmidt's three years of military service were spent as an Air Force flight surgeon and base surgeon in the Far East as well as at stateside bases.

Dr. and Mrs. Schmidt enjoy the hospitality hour during the TMA's fall conference.

Dr. Schmidt has long been concerned about his community and its quality of life. He has served as director and president of the Rotary Club and district governor for Rotary International. Other civic positions have included president, United Fund; chairman of the board, Pecos Savings and Loan Association; founder, Pecos Planned Parenthood Clinic; chairman, Finance Committee, Pecos United Methodist Church; member, Permian Basin Planning Commission; and city health officer.

Decision to enter politics

Speaking of his political activity, Dr. Schmidt explained his reasons for entering politics, the main one being his belief that he had knowledge and ability to offer for the benefit of his community. "Many of my patients objected to my participation in what they termed 'dirty politics,' but I have

This is a real fish story. Dr. Schmidt poses with a prize trout caught in Creede, Colo.

demonstrated the simple fact that politics can be clean and honorable."

His first race for mayor was contested, but he received a two to one victory. Since the first election, he has not had an opponent.

Dr. Schmidt continued, "The duties of mayor have at times conflicted with medical duties, but good planning and a bit of extra work prevents major problems. Medical emergencies always receive priority. Many of my patients became proud of the fact that their medical care was delivered by the mayor."

In April Dr. Schmidt completed ten years as mayor of Pecos, preceded by two terms as councilman. In order to devote his time to TMA activities, he did not seek reelection.

During the past year as president-elect, Dr. Schmidt said he was most impressed by the tremendous amount of time and effort that goes into the operation of TMA, especially that which is voluntarily given by the delegates, the council and committee members, the trustees and officers.

His first involvement with TMA came in 1956 from an appointment to the Committee on Rural Health and Doctor Distribution (currently Committee on Rural Health). "It was an interesting assignment, and it became more important as the trend of medical practice moved away from primary care to superspecialization," Dr. Schmidt recalled. Later he became chairman of the committee, serving in that capacity until his election to the TMA vice presidency in 1971. He has also served on reference committees and totals 15 years service in the TMA House of Delegates.

"The mechanics of medical administration have attracted and intrigued me to the point of addiction," Dr. Schmidt said, looking forward to his tenure as president.

Active in medical affairs

In addition to his numerous TMA activities, Dr. Schmidt's list of contributions to the medical community is lengthy. He has served as county society president twice; District One president; hospital chief-of-staff twice; vice president, Texas Academy

Behind the controls—pilot Schmidt checks the aircraft's instrumentation.

of Family Physicians (TAFP); member, board of directors, TAFP for nine years; member, American Medical Association Council on Rural Health; consultant, Arthur D. Little Company, for the AMA on standards for small hospitals; and member, board of directors, Reeves-Loving Cancer Society.

Family life is also important to Dr. Schmidt. He and his wife, the former Mary Ruth Jeffries of Jonesboro, Tex, have a daughter and a son. Joanne, a graduate of Hardin Simmons University, is currently a computer specialist at the University of Arkansas Medical School. Shane is a freshman at Baylor University. Dr. Schmidt credits Mary as a major contributor to both his medical and political careers. He said she is an efficient secretary and organizer for all his activities as well as a provider of support and assistance. The family enjoys outdoor activities together.

Returning from a meeting in Houston, Dr. Schmidt boards a Beechcraft Travelair for the return flight to Pecos.

They spend a few days each year at their cabin in Creede, a small historic Colorado mining town, where they hunt, fish, explore, and in the winter, enjoy a snowmobile. The Schmidts hope to have time in the future to build a home on this mountain property along the Rio Grande.

The president's most immediate future goal is working through TMA and allied organizations to oppose any forces which would destroy the private practice of medicine. It is also his future ambition to provide more medical facilities for his community by encouraging new doctors to settle in the area.

Reflecting on his own experiences, Dr. Schmidt offered this advice to new physicians: "Become involved in political activity; learn as much as possible about candidates; become acquainted with them; attend as many meetings as possible of local, district, and state medical groups; and volunteer for committee assignments."

The joy of creativity through an artist's brush

Norma E. Porres, M.D.

I began painting as a child, illustrating my copybooks in school and copying all kinds of pictures, especially figures. Nobody in my family painted so the only encouragement I had was the endorsement of very artistic parents. Comic strips, like those of "Prince Valiant," were a special source of inspiration, and even today I find its drawings beautiful.

I consequently never had any formal training, but by endless copying I began to realize my own mistakes, and a practice of trial and error has never quite finished. In time I learned to recognize certain basic rules of balance and proportion, the use of light and movement, and shadows. Studying anatomy in medical school also proved to be tremendously helpful.

I am sure that every artist follows some type of development in painting, whether self-taught or formally trained. I am not always pleased with the final product, nor consider myself a good painter, but painting has given me innumerable hours of pleasure and the immense joy of creativity.

While I consider still-life and landscapes a great source of discipline and challenge, portraiture has remained my favorite. By copying famous portraits I have learned much through the years. My first award was for a charcoal copy of the portrait of

Dr. Norma Porres

Lady Hamilton by George Romney. I was in the sixth grade. After that I copied other English and French painters, renaissance painters, the madonnas and children of the Italian painters, works of Ingres and David, Delacroix, etc. My inclination has always been toward realistic painting, influenced perhaps with whatever I feel about the subject and with as much expression as my limitations permit.

Getting started

I think the best medium for a beginner is the one that can be easily corrected. I used charcoal, pastel pencils, or plain pencils. Later I advanced to ink, tempera, water color, pastels, and finally oils. I love water color, but contrary to what many people think, this is one of the most difficult media. Since it requires twice as much time and dedication as other media, I only use it when illustrating other works such as decoupage and similar crafts.

Before I start a portrait I try to know the subject as well as possible and in as many moods as possible. I develop the pose, the garment, the background in my mind. Only when I know what I want do I start the actual painting. After I obtain the likeness I concentrate on maintaining the balance and proportions, trying colors and varying

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Editor's note: Dr. Porres, a native of Cuba and a graduate of the Havana University School of Medicine, came to the United States in 1951 with her husband, Dr. Felipe D. Porres. She has served as director of the outpatient clinic of the Lubbock City-County Health Unit and was associated with Texas Tech University's health service. Dr. Porres has been in private practice since 1965. Involved in many activities, she was one of 20 delegates from the United States who traveled to India in 1971 to confer with that country's top leaders in the field of family planning. It is her interest in painting, however, that is the topic of this hobby feature. The editors of *Texas Medicine* appreciate this opportunity to share some of her works and her feelings on art.

At left, a portrait of Dr. Porres' daughter at age 15. Below, the painting is entitled "Guatemalan Madonna." The mother, wearing an embroidered blouse in shades of blue, carries a colorful basket of fruit to market as her baby sleeps.

At left, the flowers lining this quiet Spanish street and abounding from the overlooking balconies are sprays of reds, oranges, greens, and yellows. Below, the painting of the ruins of the oracle of Delphi in Athens, Greece illustrates the artist's feeling for soft hues, balance, and attention to details.

my palette accordingly.
I have found that one always develops a certain technique, either by oneself or with the aid of instructors. As a matter of fact, I think that a good teacher probably tries to retain the student's personal interpretation by simply putting the finishing touches to the student's own technique.
The most important lesson that I have learned is that one should always keep painting on the whole picture, never quite finishing any detail until all details fall into their proper place. At this point, I prefer to leave the painting alone for days or even weeks, looking at it once in a while, making notes of what is right or wrong, and only then will I begin the long process of polishing and finishing. I dare say that few paintings are really truly finished.

A sensorial art

Painting, for me, is essentially a sensorial art. For the common man and woman, recognizing the content of a picture is important. The intellectual play of guessing what a painting represents is not particularly attractive to me. This does not mean that one can not appreciate the balance of color or the movement in geometrical forms, but then again, this is purely a visual image that arouses whatever is aesthetically beautiful to us. In this sense, I consider literature the most complete of all art forms.
After the portraits of my children, my favorite painting is that of the Guatemalan Indian and child. In Antigua, Guatemala, I was visiting a beautiful cathedral fronted by a great plaza where the natives gathered to sell their wares and visit. I saw an Indian girl with her baby wrapped in a shawl, sound asleep on his mother's back and undisturbed by the considerable noise and the flies zooming around his little head. I quickly made a sketch on an envelope, the only piece of paper available at the moment making notes about some of the colors, and such factors as the time of day. When I came home I painted what I call my "Guatemalan Madonna."
The best advice to give to someone who wants to paint is to give it a try. Some basic readings might be helpful, and most art supply stores have simple books available. And of course, I still think that copying good paintings is one of the best methods of learning.

At left, a portrait of Dr. Porres' son at age 17. Below, a sunny Spanish plaza is viewed from the shadows of the pillars' arch.

I imagine that some talent or sense of balance or proportion is inherent in some people. Real talent may be born, but I am sure that proper training is indispensable if one wants to achieve any degree of perfection. If training is not available to the hobby seeker, however, this is no reason not to give painting a try. Contrary to the general idea of the care-free and bohemian artist life, the true artist faces a life of intense discipline and dedication, not very much unlike a doctor's life. Few of them ever reach public recognition.

Joy of creativity

The joy of creativity can be shared by anyone, even in small portions, and a sense of beauty is as essential to life as breathing. If one can absorb even a few of these emotions from painting, I feel that all efforts are well remunerated.

The type of subject and the way in which it is approached and expressed reflects the painter's personality. Diversity exists when the same subject is painted by different artists for each views the subject according to his own emotional response, his past experiences, and his power of cognition. In this sense, whether painting as a profession or a hobby, the ability to put on canvas a moment of light and shadows, a mood, an expression, an object that means beauty, is perhaps one of the nicest abilities in life; and for which in my own humble performance, I do remain quite grateful.

LEGAL PROTECTION: FACTS YOU SHOULD KNOW

Sam V. Stone, Jr.
TMA Office of General Counsel

Editor's note: This information supplements the discussion pertaining to informed consent which appeared last month in *Texas Medicine* under the same column heading.

The controversy over whether or not consent forms should be detailed or general in nature is a question which has concerned physicians and attorneys for many years.

An appellate court in Louisiana in 1960, considered the question of whether or not proper consent had been granted by the patient to the physician when the patient signed a form which merely stated: "I hereby authorize the physician or physicians in charge to administer such treatment and the surgeon to have administered such anesthetics as found necessary to perform this operation which is advisable in the treatment of this patient."

With regard to the form, the court said: "We think the above so-called authorization is so ambiguous as to be almost completely worthless, and, certainly, since it fails to designate the nature of the operation authorized, and for which consent was given, it can have no possible weight under the factual circumstances of the instant case . . ."

The Texas Supreme Court has held that *physicians* have a "duty to make a reasonable disclosure to the patient of those risks that are incident to medical diagnosis and treatment." For this reason, the securing of informed consent for a medical treatment or a surgical procedure may only be secured by the physician himself. The patient should execute a consent form which, as a minimum, contains the points set forth in the following form. Some feel that any consent form itself should be expanded so that the nature of the operation, the purpose of the operation, the possible alternative methods of treatment, and the possible consequences, risks and possibility of complications are specifically set out in the written authorization. Certainly these items should be discussed by the physician and the patient with the physician assuring himself that the patient has a full understanding of these matters.

CONSENT TO OPERATION, ANESTHETICS, AND OTHER MEDICAL SERVICES

Date_____ Time_____ AM PM

1. I authorize the performance upon

_____ of the following
(myself or name of patient)

operation_____
(state nature and extent of operation)

to be performed by or under the direction of

Dr._____.

2. I consent to the performance of operations and procedures in addition to or different from those now contemplated, whether or not arising from presently unforeseen conditions, which the above-named doctor or his associates or assistants may consider necessary or advisable in the course of the operation.

3. I consent to the administration of such anesthetics as may be considered necessary or advisable by the physician responsible for this

service, with the exception of_____

_____.

_____.
(state "none," or "spinal anesthesis," etc.)

4. The nature and purpose of the operation, possible alternative methods of treatment, the risks involved, the possible consequences, and the possibility of complications have been ex-

plained to me by Dr._____

and by_____.

5. I acknowledge that no guarantee or assurance has been given by anyone as to the results that may be obtained.

6. I consent to the photographing or televising of the operations or procedures to be performed, including appropriate portions of my body, for medical, scientific or educational purposes, provided my identity is not revealed by the pictures or by descriptive texts accompanying them.

7. For the purpose of advancing medical education, I consent to the admittance of observers to the operating room.

8. I consent to the disposal by hospital authorities of any tissues or body parts which may be removed.

9. I am aware that sterility may result from this operation. I know that a sterile person is incapable of becoming a parent.

10. I acknowledge that all blank spaces on this document have been either completed or crossed off prior to my signing.

(CROSS OUT ANY PARAGRAPHS ABOVE WHICH DO NOT APPLY)

Signed_____
(Patient or person authorized to consent for patient)

Witness_____

Witness_____

If the patient is under 18 years of age at the time of the medical treatment and the patient's guardian or parents do not join in the consent, the physician should include in the consent form the specific statutory authority for treatment of the minor under the recently enacted Texas Family Code. This subject was covered in the "Medicine and the Law" column, *Texas Medicine,* **March 1974, p 109.**

MEDICINE AND THE LAW

RESPONSIBILITY FOR INPATIENT CARE—THE PHYSICIAN'S OR THE HOSPITAL'S?

Since 1965, when the Supreme Court of Illinois rendered its opinion in *Darling vs. Charleston Hospital,* 211 N.E. 2d 253, affirming 200 N.E. 2d 149, in which a hospital was held liable for failing to supervise the treatment of a patient by a physician, various writers and associations have attempted to convince the medical community that every hospital is liable for the independent medical acts of physicians on the voluntary medical staff of the hospital and, as a corollary, the staff member serves as an agent of the board of trustees or board of directors of the hospital which itself is responsible for the individual medical decisions of the staff member.

Extending this concept, advocates of this position have attempted to convince physicians that the board of directors, in addition to having final authority over staff appointments (which is recognized as the legal responsibility of any corporate board), has the legal duty to direct the practice of medicine in the institution. The medical staff of every hospital should assume its responsibility in seeing that the medical staff organization operates effectively for the best interest of the patient and that authority over the practice of medicine is not usurped by persons or agencies not legally authorized to practice medicine within the State of Texas. The state law vests in the individually licensed physician the sole authority to diagnose, treat, or offer to diagnose or treat "any disease or disorder, mental or physical or any physical deformity or injury by any system or method and to effect cures thereof. . . ."

Neither a nonprofit hospital corporation nor a hospital corporation operated for profit can, through its employees, practice medicine.

The *Darling* case has been distinguished in more recent Illinois appellate court cases (*Collins vs. Westlake Community Hospital,* 299 N.E. 2d 326, Ill. App. Ct. June 7, 1973) and (*Lundahl vs. Rockford Memorial Hospital,* 235 N.E. 2d 671, Ill. App. Ct. March, 1968) as well as by courts of other states. No Texas appellate court has followed the ruling in *Darling* nor has any Texas court indicated that a hospital would be held liable for failing to oversee the treatment of a patient by a non-employed staff physician.

In its opinion in *Lundahl,* the Illinois appellate court distinguished this case from *Darling* by the fact that in the *Darling* case the treating physician was an employee placed by the hospital on emergency duty, subject to its supervision. This was not the fact situation in *Lundahl.*

In its 1963 opinion in *Collins,* the Illinois court noted that the plaintiff contended that it was "the duty of the hospital to review the medical care being given plaintiff by Dr. Hubbard, not withstanding the fact that the case was primarily in the charge of Dr. Hubbard who had been engaged by plaintiff's parents."

The court said, "The evidence does not show that Dr. Hubbard failed to exercise good medical judgment in waiting to determine whether certain symptoms were indicative of circulatory or nervous disorder. The decision to treat the patient in a particular manner is a medical question entirely within the discretion of the treating physician, not the hospital."

In its opinion rendered in *Hull vs. North Valley Hospital,* 498 Pac.2d 136, the Montana appellate court unanimously concluded that the hospital was not negligent in permitting the doctor in question to use its facilities in light of an allegedly dubious previous record and that the unpaid medical staff was not an arm of the hospital organization (and thus that any acts or omissions of such staff were not those of the hospital).

The opinion in *Hull* cites with approval the language in 69 ALR 2d p 309:

> Sometimes this determination rests primarily on peculiar facts of individual cases, but there are certain general principles in this area that should be referred to. In the normal situation where a sick or injured person consults his own doctor for diagnosis and treatment, and the latter recommends hospital care, the hospital to which the patient is admitted is not liable for the doctor's misconduct resulting in injury to the patient, even though such misconduct takes place at the hospital, and even though certain other links between the hospital and the doctor, such as the circumstance that the latter may be on the former's "staff," may exist . . .

The opinion also states: "No authority cited even discusses the real point in issue here—is the hospital negligent under the ordinary rules of negligence for not limiting or expelling the doctor before the fact of the case of malpractice and excluding any reference to the malpractice itself except in damages?"

The court concludes that a non-employed staff physician does not fall within the scope of the master-servant relationship, but is rather an independent contractor.

This opinion, along with the two cited from the Illinois appellate court recognize that there are obvious difficulties in trying to hold a hospital liable for professional negligence of an unpaid medical staff member without the capability of establishing an employee-employer relationship between the physician and the hospital. Since Texas law prohibits the hiring of physicians by hospitals to practice medicine as the hospital's employee, it is difficult to find the applicability of the *Darling* decision in this state.

TMA Office of General Counsel
Sam V. Stone Jr.

Medical Newsmakers

The 1973 Medical Sportsman of the Year award was presented to DR. RICHARD E SCHUETTE, Houston radiologist. Dr. Schuette earned this coveted award, presented by *Rx Sports and Travel* magazine, for his achievements in tennis during the year.

A research team at The University of Texas Medical Branch at Galveston is investigating a hormone, thymosin, believed vital to the immune system. DR. ALLAN GOLDSTEIN, co-discoverer of thymosin, is head of the team composed of DR. JOHN HOOPER, DR. GERALDINE COHEN, DR. GARY THURMAN, DR. MILDRED McDANIEL, and DR. RICHARD SCHULOF. Dr. Goldstein predicted that if clinical programs with thymosin proved successful, "within five years physicians will be able to use thymosin to treat patients who have defective immunity the way they now treat diabetic patients with insulin."

DR. CHARLES F GREGORY, chairman of the Division of Orthopedic Surgery at The University of Texas Southwestern Medical School at Dallas, was the principal guest lecturer at the spring meeting of the British Orthopedic Association April 5, at the University of Keele in Staffordshire, England. He was the only American invited to have a major part in the association's four-day program. Topic of Dr. Gregory's lecture was "some observations on the postgraduate medical education of orthopedic surgeons."

Recipient of the Burroughs Wellcome Clinical Pharmacology Award for 1974 is DR. WILLIAM A PETTINGER, professor of pharmacology and internal medicine at The University of Texas Southwestern Medical School at Dallas. As the 23rd Burroughs Wellcome Scholar, Dr. Pettinger will expand his activities to form a Division of Clinical Pharmacology at Southwestern. The aim of the awards is to stimulate excellence in teaching, training and research in clinical pharmacology.

DR. FRANK HARRISON, president of The University of Texas Health Science Center at San Antonio, has been appointed to the National Society for Medical Research Board of Directors. The announcement was made during the annual meeting of the NSMR in Chicago.

DR. ROGER N ROSENBERG has been named chairman of the Department of Neurology at The University of Texas Southwestern Medical School at Dallas. Dr. Rosenberg came to Southwestern from the School of Medicine of the University of California at San Diego, where he had been associate professor of neurosciences and pediatrics and attending neurologist at the University Hospital.

Two national appointments were received by DR. DAVID D DALY, professor of neurology at The University of Texas Southwestern Medical School at Dallas. He will serve a four-year term on the neurological disorders program projects committee of the National Institute of Neurological Diseases and Stroke. He has also been named to a five-year term on the American Board of Qualifications in Electroencephalography, which conducts examinations twice a year to certify experts qualified to operate the EEG device which records brain waves, used in evaluation of patients with brain or nervous system disorders.

Medicine in literature

Orthopedic Surgery in the Zone of Interior
Editor in Chief: Col William S Mullins, MSC, USA, Mather Cleveland, and Alfred R Shands, etc, 1099 pages, illus, 1970, $12.25

Orthopedic Surgery in the Zone of Interior concludes another facet in the subseries of history of the armed services in World War II. Wounds of the extremities with their multitudinous problems exceeded all other wounds.

This volume deals with the final stages of management of both combat wounds and most of the noncombat conditions. Vital administrative actions and procedures are discussed along with standardization of treatment for a maximum preservation of our fighting forces.

The importance of development and selection of equipment that is practical and usable in the field of action is stressed.

The function and activities of consultants in all fields is discussed. Their contributions to the training of medical and paramedical personnel to carry out treatment and rehabilitation programs is one of the bright spots in our medical achievements.

Frankness in the discussion of specific injuries such as fracture of the navicular in the carpal bone of the wrist and many others form a valuable reference for management in future years.

The importance of bringing the disabled wounded rapidly to the zone of interior is vital for smoother convalescence, rehabilitation and recovery. It frees the fighting forces to achieve their objectives. Training courses and hospital inspections emphasize efficiency in diagnosis and the handling of available personnel properly to get the job done in the quickest possible time.

Preservation of the effectiveness of all of our combat forces is the primary objective.

The intelligent selection of candidates and strict instructional discipline avoids many injuries. The proper use of splints, bandages and appliances is likewise important with improvisations to fit each individual case. Physical therapy, reconditioning and occupational therapy all have their proper usage in the preservation of good functional extremities including all functional joints.

The section on the spine was surprisingly short (20 pages) but not when one considers that 70% of the injuries involved the extremities.

JOE C RUDE, MD
Austin

IN THE TMA LIBRARY

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RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

L W Spikes
Ralls, 1908-1973

I N Watson
San Antonio, 1908-1973

N P Plechas
Dallas, 1913-1974

J Toledo
Mt Pleasant, 1926-1973

J R McFarlane
Brownwood, 1906-1974

J K Leverett
Fort Worth, 1922-1973

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

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Recent deaths

Dr. L W Spikes
Ralls family physician, Dr. Lowell Wilson Spikes died Oct 10, 1973. He was 65 years old.
Dr. Spikes was graduated from The University of Texas Medical Branch at Galveston in 1932. He completed an internship at Scott and White Memorial Hospital, Temple, and moved to Sanatorium, Tex, where he was associated with the State Tuberculosis Sanatorium. During World War II, he served as a major in the US Army in England and France. When he returned to the States, he established a medical practice in Ralls.
Dr. Spikes was a member of Lubbock-Crosby-Garza County Medical Society and Texas Medical Association.
The physician is survived by his wife, Lenora Tinnin Spikes, Ralls; son, Carey Wilson Spikes, Houston; daughter, Mrs. Anne Campbell, Tyler; stepson, Sidney Tinnin, Houston; mother, Mrs. J J Spikes, Ralls; and two sisters.

Dr. I N Watson
San Antonio ENT physician, Dr. Isaac Newton Watson died Nov 29, 1973. He was 65 years old.
Born in Oklahoma, Dr. Watson attended the University of Oklahoma, Norman, and was graduated from the University of Oklahoma School of Medicine, Oklahoma City. He completed an internship at French Hospital, San Francisco, and an ENT residency at the University of Pennsylvania Affiliated Hospitals, Philadelphia, prior to establishing a medical practice in Edmond, Okla. He served with the US Air Force as a lieutenant colonel during World War II, and following discharge, moved to San Antonio.
Dr. Watson's medical memberships included Bexar County Medical Society, Texas Medical Association, and American Medical Association. He was certified by American Board of Otolaryngology.
He is survived by his wife, Lucille Hrabe Watson, Norman, Okla; father, I N Watson, Blair, Okla; brother, Dr. O Alton Watson, Oklahoma City; and sister, Mrs. Claudia Reid, Tulsa.

Dr. Spikes

Dr. Plechas

Dr. N P Plechas
Dallas surgeon, Dr. Nicholas Peter Plechas died Jan 6, 1974, in Dallas.
Born in Nebraska in 1913, Dr. Plechas was graduated from the University of Nebraska, Lincoln, with a BS degree. He received his MD degree from the University of Nebraska College of Medicine, Omaha, in 1937, and interned at St Margaret Memorial Hospital, Pittsburgh, Pa. Following residencies at Woman's Hospital, Detroit, and Ohio State University Affiliated Hospitals, Columbus, Dr. Plechas practiced medicine in California for 23 years. He came to Texas in 1970 and practiced in Corpus Christi for one year before moving to Dallas where he remained until his death.
Dr. Plechas was a member of American Society of Abdominal Surgeons, California Medical Association, Texas Medical Association, American Medical Association, and Dallas County Medical Society.
He is survived by his wife, Rose Poturica Plechas, Dallas; two sons, David Martin Plechas, Cerritos, Calif, and Michal John Plechas, Long Beach, Calif; daughter, Nedra Ann Plechas, Long Beach, Calif; two brothers; and one sister.

Dr. Toledo

Dr. McFarlane

Dr. J Toledo

Dr. Jorge Toledo, surgeon in Mt Pleasant since 1964, died Dec 3, 1973, of a gunshot wound. He was 47 years old.

A native of Havana, Cuba, Dr. Toledo was graduated from Facultad de Medicina de la Universidad de la Habana, Havana, Cuba, and completed both internships and residency in Cuba. He moved to the United States in 1961, and completed another internship at Pottsville Hospital, Pottsville, Pa, prior to establishing a medical practice. He practiced in Pennsylvania and Kentucky before moving to Mt Pleasant in 1964.

Dr. Toledo was a member of Camp-Morris-Titus County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Elsa Sosa Toledo, Mt Pleasant; daughter, Elsa Toledo, Mt Pleasant; three sons, Jorge Toledo, Jr, Austin, Raul Toledo, Mt Pleasant, and Victor Toledo, Mt Pleasant; and parents, Mr. and Mrs. Candido Toledo, Cuba.

Dr. J R McFarlane

Dr. Joe Robert McFarlane, Brownwood family physician and rancher, died Jan 8, 1974, in a Houston hospital. He was 67 years old.

Dr. McFarlane attended The University of Texas at Austin and was graduated with an MD degree from The University of Texas Medical Branch at Galveston in 1930. Following internships at St Mary's Hospital, Galveston, and Buffalo General Hospital, Buffalo, NY, Dr. McFarlane established his practice in Brownwood. He also practiced part-time in Phoenix, Ariz, from 1949 to 1956.

Dr. McFarlane served as both secretary and president of Brown Mills-San Saba County Medical Society. He was also a member of American Academy of Family Physicians, American Society of Abdominal Surgeons, Texas Medical Association, and American Medical Association,and was certified by National Board of Medical Examiners in 1932.

The physician is survived by his wife, Helen Russell McFarlane, Brownwood; two sons, Dr. Joe McFarlane, San Antonio, and Dr. John McFarlane, Houston; two daughters, Mary Helen McFarlane, Brownwood, and Mrs. Virginia Louise Kolter, Houston; one brother; one sister; and eight grandchildren.

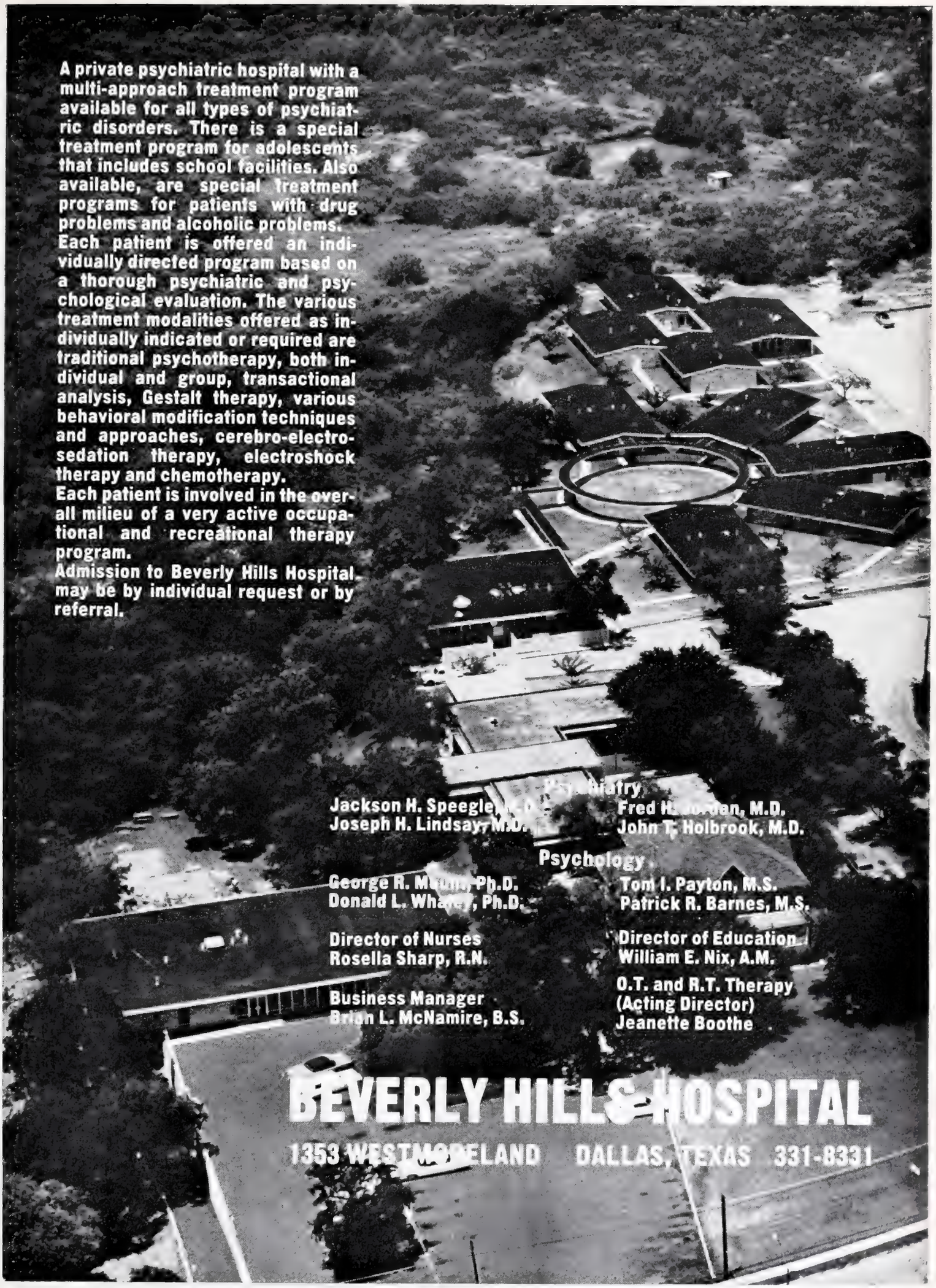
Dr. J K Leverett

Dr. Jack Knox Leverett died Oct 26, 1973. The 50-year-old physician had practiced in Fort Worth since 1949.

Dr. Leverett received an MD degree from The University of Texas Southwestern Medical School at Dallas. He completed an internship and residency at St Joseph Hospital, Fort Worth, and began the practice of industrial medicine in Fort Worth. His practice was interrupted by service with the US Navy during the Korean Conflict, but he returned to Fort Worth following discharge.

Dr. Leverett was a member of American Academy of Occupational Medicine, Industrial Medical Association, Tarrant County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Elizabeth Snoddy Leverett; daughter, Jaye Lane; and two sons, Jack Knox Leverett, Jr, and Gerald Bruce Leverett, all of Fort Worth.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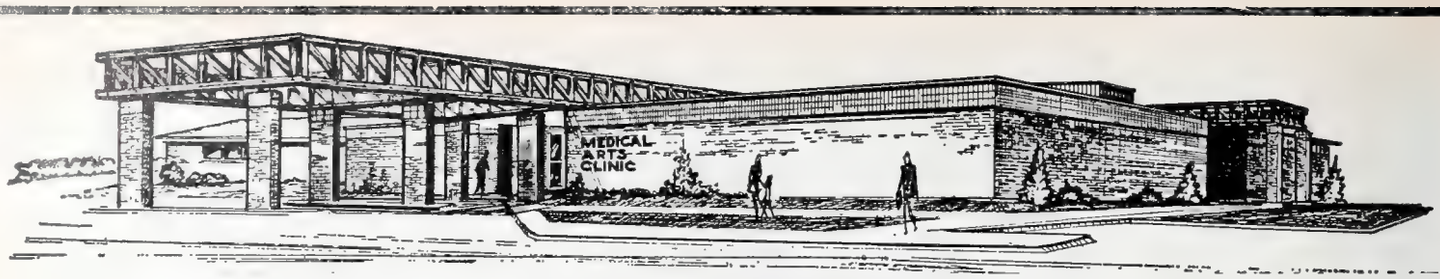

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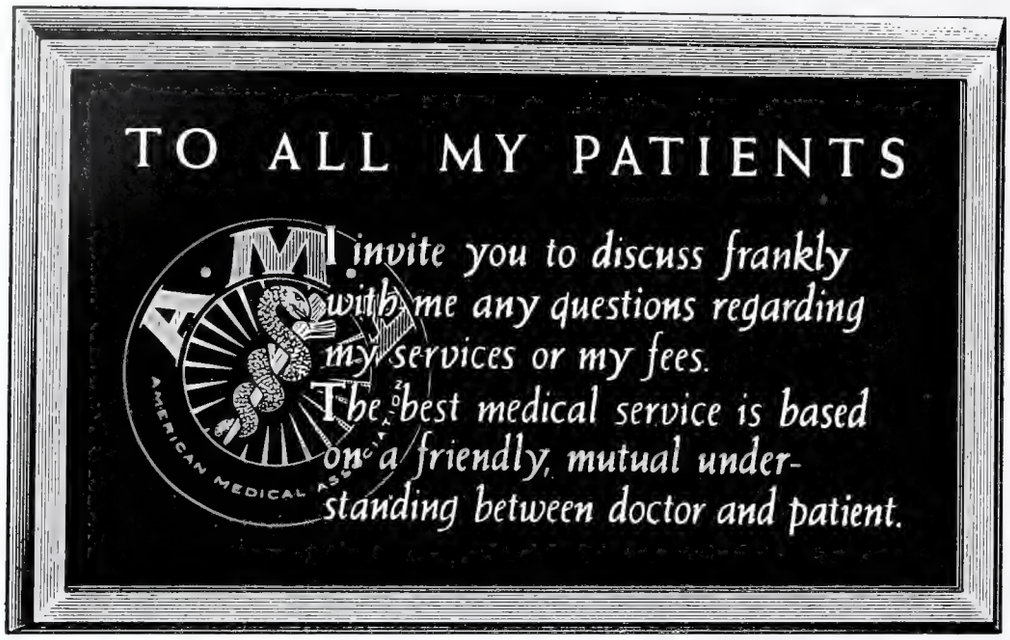

Do Your Patients Understand Your Fees?

Patients hesitate to ask about fees. But they **want** to know. They naturally worry about what their medical costs will be. And if they don't feel free to talk about it, serious problems—misunderstanding, resentment and even deep hostility—can arise, threatening the all-important rapport between you and your patients.

Open discussion **before** treatment prevents such embarrassing problems. It paves the way for mutual understanding and good will.

An AMA Fee Plaque, prominently displayed in your waiting room, serves as an open invitation for your patients to discuss medical costs and financial problems with you. It shows that you care. Just seeing the message can give many financially worried patients peace of mind.

The AMA Fee Plaque works hard to prevent doctor-patient misunderstandings. And it works well.

Suitable for wall or desk display, the plaque measures 6″ x 10½″. The lettering is white on a dark brown background and the frame is durable beige plastic.

How do you obtain one?

Just mail the coupon below and your check, or money order, for $2.40 (postage paid). Your Fee Plaque will be sent to you by return mail.

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Please send me_____A.M.A. fee plaques, offered at only $2.40 each. Enclosed is my check or money order for $_____.

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A Comprehensive Therapeutic Program for the G.I. patient

Enarax® (oxyphencyclimine HCl/hydroxyzine HCl) Tablets, as adjunctive therapy, can help relieve a wide range of gastrointestinal disorders—and their accompanying anxiety.* Without cooperation of the patient, however, no medicinal regimen can succeed entirely... an understanding of the condition, the factors involved in its development, and the proper approach to self-care are often basic to successful therapy.

To help save some of your valuable time in providing this background information, this specially designed G.I. Patient Relief Kit is available on request—a valuable addition to your overall therapeutic program.

In addition to a complimentary introductory prescription for **Enarax** Tablets, this handsome kit contains the information and appropriate stimuli to start the patient on a program of proper self-care:

Patient Information Booklet, "You and Your Digestive System"—easy-to-swallow advice on how to take care of the gastrointestinal tract, including diet information.

Sanka® **Decaffeinated Coffee** sample packets to provide an alternative to regular coffee with caffeine.

Gelusil® **Liquid** to help relieve heartburn, dyspepsia, gas, and flatulence between meals.

Money-saving coupon for future purchase.

You can obtain a quantity of these kits packaged for easy office storage by filling out the attached Prepaid Business Reply Card.

ROERIG Pfizer

A division of Pfizer Pharmaceuticals
New York, New York 10017

*Based on a review of this drug by the National Academy of Sciences—National Research Council, F.D.A. has classified this indication as "possibly" effective.

Please see following page for prescribing information, including adverse reactions, contraindications and warnings.

To help control G.I. distress/calm psychic tension*

Enarax® tablets

(oxyphencyclimine HCl/hydroxyzine HCl)

- Combination provides for effective 12-hours antispasmodic/anticholinergic action of oxyphencyclimine with the calming action of Atarax® (hydroxyzine HCl).
- As adjunctive therapy, helps relieve a wide range of gastrointestinal disorders, and their accompanying anxiety—simultaneously. However, it should be used with caution in patients with ulcerative colitis.
- Avoids the confusion and expense of two medication schedules.
- Convenient b.i.d. dosage.
- Individualized therapy—Enarax® 5 (oxyphencyclimine HCl 5 mg./hydroxyzine HCl 25 mg.). Enarax® 10 (oxyphencyclimine HCl 10 mg./hydroxyzine HCl 25 mg.).
- Usually well tolerated; drowsiness or blurred vision may occur.

More detailed professional information available on request.

SEE REVERSE FOR FREE OFFER.

Composition

Each Enarax 5 tablet contains:
oxyphencyclimine HCl ..... 5 mg.
hydroxyzine HCl N.F. (Atarax)® ..... 25 mg.
Each Enarax 10 tablet contains:
oxyphencyclimine HCl ..... 10 mg.
hydroxyzine HCl N.F. (Atarax)® ..... 25 mg.

Description. Enarax is a combination of oxyphencyclimine HCl and hydroxyzine HCl. Oxyphencyclimine HCl is a crystalline substance characterized by the chemical formula: (1-methyl-1,4,5,6 tetrahydro-2-pyrimidyl-methyl alpha-cyclohexyl-alpha-phenylglycolate hydrochloride). It is soluble and stable in aqueous solutions.

Hydroxyzine HCl is designated chemically as 1-(p-chlorobenzhydryl)-4-[2-(2-hydroxyethoxy)-ethyl] piperazine dihydrochloride.

Actions. Oxyphencyclimine HCl provides long acting suppression of gastric secretion through its anticholinergic action. The mechanism of this action is the inhibition of acetylcholine at postganglionic cholinergic sites in structures innervated by postganglionic parasympathetic nerves and on smooth muscle not so innervated but responsive to acetylcholine.

Hydroxyzine HCl, marketed under the trade name, Atarax®, has been shown clinically to be an effective anti-anxiety agent. It induces a calming effect in anxious, tense individuals without impairing mental alertness. It is not a cortical depressant, but its action may be due to a suppression of activity on certain key regions of the subcortical area of the central nervous system.

***Indications.** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Possibly Effective: As adjunctive therapy in peptic ulcer; irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, functional gastrointestinal disorders); functional diarrhea; drug induced diarrhea; ulcerative colitis, and urinary bladder spasm and ureteral spasm (i.e. smooth muscle spasm).

Final classification of these less than effective indications requires further investigation.

Contraindications. Because of its anticholinergic activity, Enarax is contraindicated in the presence of glaucoma, obstructive uropathy (i.e. bladder neck obstruction due to prostatic hypertrophy), obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis, etc.); paralytic ileus; intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis.

Warnings. Hydroxyzine, when administered to the pregnant mouse, rat, and rabbit induced fetal abnormalities in the rat at doses substantially above the human therapeutic range. Clinical data in human beings are inadequate to establish safety in early pregnancy. Until such data are available, hydroxyzine-containing drugs are not advised in early pregnancy.

In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heatstroke due to decreased sweating).

Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful.

Enarax may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery, or perform hazardous work while taking this drug.

Precautions. Anticholinergics should be used with caution in patients with:
autonomic neuropathy,
hepatic or renal disease,
ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon.

hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension and nonobstructing prostatic hypertrophy; hiatal hernia associated with reflux esophagitis, since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis).

The use of this drug in the presence of complication of biliary tract disease should not be relied upon.

Tachycardia should be thoroughly investigated before giving anticholinergic (atropine-like) drugs since they may increase the heart rate.

With overdosage, a curare-like action may occur.

Adverse Reactions. As with other anticholinergics, oxyphencyclimine HCl produces certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these.

Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis, dilatation of the pupil; cycloplegia, increased ocular tension; loss of taste; headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestation; some degree of mental confusion and/or excitement especially in elderly persons.

Decreased sweating is another adverse reaction that may occur. It should be noted that adrenergic innervation of the eccrine sweat glands on the palms and soles make complete control of sweating impossible. An end point of complete anhidrosis cannot occur because large doses of drug would be required, and this would produce severe side effects from parasympathetic paralysis.

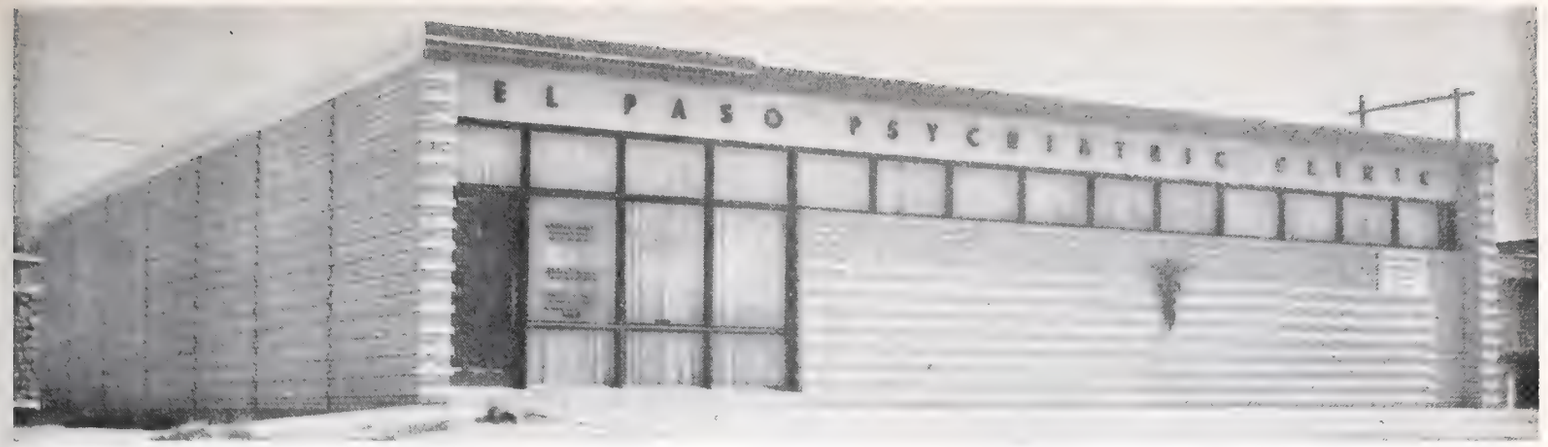
Side effects which occasionally occur with hydroxyzine HCl (Atarax)® are drowsiness, xerostomia, and, at extremely high doses, involuntary motor activity, all of which may be controlled by reduction of the dosage or discontinuation of the medication.

Dosage and Administration. The recommended adult dose is usually one Enarax 5 or one Enarax 10 tablet two times a day or three times a day, depending on individual response. Proper diet and antacids should be used where indicated as concomitant therapy. The safe use of Enarax in children has not been established; therefore, the drug should not be used in children.

Drug Interactions. The potentiating action of hydroxyzine must be considered when the drug is used in combination with central nervous system depressants.

How Supplied. Enarax 5 is available as white scored tablets in bottles of 60. Enarax 10 is available as black and white scored tablets in bottles of 60.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017



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CHAMPUS APPROVED

Why is Gantanol® (sulfamethoxazole) basic therapy in nonobstructed urinary tract infections?

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, pur-

Because it is considered a good choice...

- for efficacy in nonobstructed cystitis, pyelonephritis and pyelitis
- for control of susceptible *E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris*
- for prompt antibacterial blood and urine levels in from 2 to 3 hours after initial 2-gram adult dose
- for economical around-the-clock coverage
- for maximum patient cooperation with easy-to-remember B.I.D. dosage

Basic Therapy

Gantanol®

(sulfamethoxazole)

Tablets/Suspension
(0.5 Gm) (0.5 Gm/teasp.)

pura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

SEAVIEW PSYCHIATRIC HOSPITAL

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PROLOID® (thyroglobulin)

Caution: Federal law prohibits dispensing without prescription.

Description. Proloid (thyroglobulin) is obtained from a purified extract of frozen hog thyroid. It contains the known calorigenically active components, Sodium Levothyroxine (T_4) and Sodium Liothyronine (T_3). Proloid (thyroglobulin) conforms to the primary USP specifications for desiccated thyroid—for iodine based on chemical assay—and is also biologically assayed and standardized in animals.

Chromatographic analysis to standardize the Sodium Levothyroxine and Sodium Liothyronine content of Proloid (thyroglobulin) is routinely employed.

The ratio of T_4 and T_3 in Proloid (thyroglobulin is approximately 2.5 to 1.

Proloid (thyroglobulin) is stable when stored at usual room temperature.

Indications. Proloid (thyroglobulin) is thyroid replacement therapy for conditions of inadequate endogenous thyroid production: e.g., cretinism and myxedema. Replacement therapy will be effective only in manifestations of hypothyroidism.

In simple (nontoxic) goiter, Proloid (thyroglobulin) may be tried therapeutically, in nonemergency situations, in an attempt to reduce the size of such goiters.

Contraindication. Thyroid preparations are contraindicated in the presence of uncorrected adrenal insufficiency.

Warnings. Thyroglobulin should not be used in the presence of cardiovascular disease unless thyroid-replacement therapy is clearly indicated. If the latter exists, low doses should be instituted beginning at 0.5 to 1.0 grain (32 to 64 mg) and increased by the same amount in increments at two-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out before the drug is administered. If hypopituitarism is present, the adrenal deficiency must be corrected prior to starting the drug.

Myxedematous patients are very sensitive to thyroid and dosage should be started at a very low level and increased gradually.

Precaution. As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions. Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration. Optimal dosage is usually determined by the patient's clinical response. Confirmatory tests include BMR, T_3 ^{131}I resin sponge uptake, T_3 ^{131}I red cell uptake, Thyro Binding Index (TBI), and Achilles Tendon Reflex Test. Clinical experience has shown that a normal PBI (3.5-8 mcg/100 ml) will be obtained in patients made clinically euthyroid when the content of T_4 and T_3 is adequate. Dosage should be started in small amounts and increased gradually with increments at intervals of one to two weeks. Usual maintenance dose is 0.5 to 3.0 grains (32 to 190 mg) daily.

Overdosage Symptoms. Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

(Treatment: In shock, supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.)

How Supplied. ¼ grain; ½ grain; scored 1 grain; 1½ grain; scored 2 grain; 3 grain; and scored 5 grain tablets, in bottles of 100 and 1000.

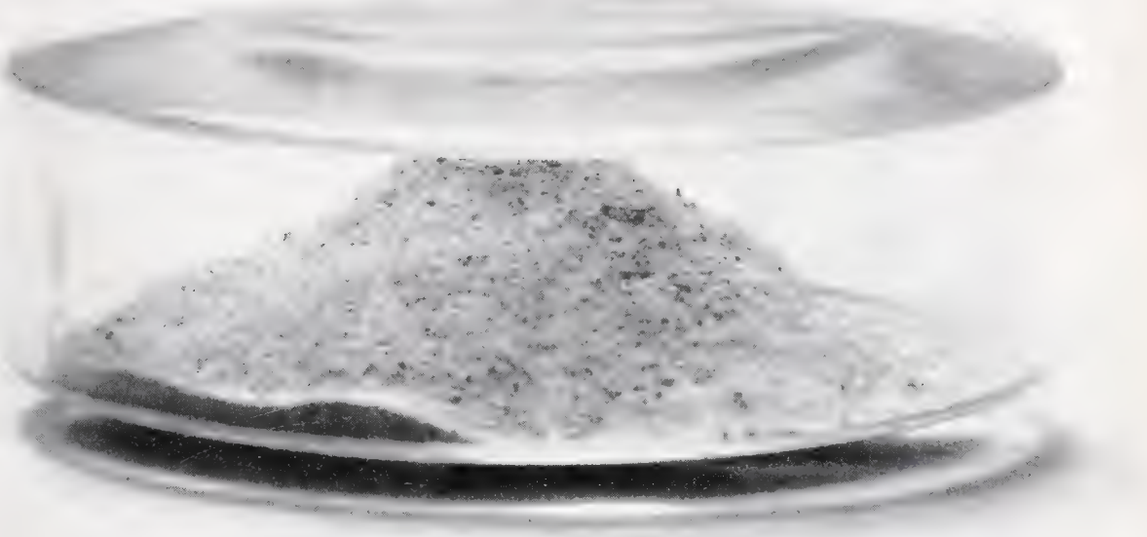
Full information available on request.

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, New Jersey 07950

PR-GP-31-B/W

IN NATURAL THYROID THERAPY:

ARE PATIENTS GETTING THE POTENCY YOU PRESCRIBE?



Unlike U.S.P. desiccated thyroid, Proloid® (thyroglobulin) offers the assurance of constant potency.

To begin with, Proloid is uniquely purified. The thyroglobulin extracted from hog thyroid is devoid of any glandular debris.

Then, Proloid is chemically and biologically assayed to assure consistent metabolic activity from batch to batch. The T_4 and T_3 content of every dose is blended for optimal thyroid replacement.

Important, too, is the fact that Proloid is invariably "fresh" when your patients take it. Under proper storage conditions, its potency will not diminish for at least four years.

All of which adds up to this: the potency of Proloid is constant...for more consistent results.

PROLOID®
(thyroglobulin)

natural thyroid therapy that leaves nothing to chance

THE NATURAL WAY

For more than thirty years PREMARIN (Conjugated Estrogens Tablets, U.S.P.) has been prepared with natural equine estrogens exclusively—without synthetic estrogen supplements. For more than thirty years it has provided the complete estrogen complex in the proportions found in its natural source. And for more than thirty years PREMARIN has enjoyed an unparalleled record of clinical efficacy and acceptance.

PREMARIN. The only estrogen preparation available that contains natural estrogens exclusively and also meets all U.S.P. specifications for conjugated estrogens. Assurance of quality for you and your patients.

PREMARIN . . . naturally.

BRIEF SUMMARY
(For full prescribing information, see package circular.)
PREMARIN®
(Conjugated Estrogens Tablets, U.S.P.)

Indications: Based on a review of PREMARIN Tablets by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications for use as follows:
Effective: As replacement therapy for naturally occurring or surgically induced estrogen deficiency states associated with: the climacteric, including the menopausal syndrome and postmenopause; senile vaginitis and kraurosis vulvae, with or without pruritus.
"Probably" effective: For estrogen deficiency-induced osteoporosis, and only when used in conjunction with other important therapeutic measures such as diet, calcium, physiotherapy, and good general health-promoting measures. Final classification of this indication requires further investigation.

Contraindications: Short acting estrogens are contraindicated in patients with (1) markedly impaired liver function; (2) known or suspected carcinoma of the breast, except those cases of progressing disease not amenable to surgery or irradiation occurring in women who are at least 5 years postmenopausal; (3) known or suspected estrogen-dependent neoplasia, such as carcinoma of the endometrium; (4) thromboembolic disorders, thrombophlebitis, cerebral embolism, or in patients with a past history of these conditions; (5) undiagnosed abnormal genital bleeding.
Warnings: Estrogen therapy should not be given to women with recurrent chronic mastitis or abnormal mammograms except, if in the opinion of the physician, it is warranted despite the possibility of aggravation of the mastitis or stimulation of undiagnosed estrogen-dependent neoplasia.

The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, retinal thrombosis, cerebral embolism and pulmonary embolism). If these occur or are suspected, estrogen therapy should be discontinued immediately.

Estrogens may be excreted in the mother's milk and an estrogenic effect upon the infant has been described. The long range effect on the nursing infant cannot be determined at this time.

Hypercalcemia may occur in as many as 15 percent of breast cancer patients with metastases, and this usually indicates progression of bone metastases. This occurrence depends neither on dose nor on immobilization. In the presence of progression of the cancer or hypercalcemia, estrogen administration should be stopped.

A statistically significant association has been reported between maternal ingestion of diethylstilbestrol during pregnancy and the occurrence of vaginal carcinoma in the offspring. This occurred with the use of diethylstilbestrol for the treatment of threatened abortion or high risk pregnancies. Whether or not such an association is applicable to all estrogens is not known at this time. In view of this finding, however, the use of any estrogen in pregnancy is not recommended.

Failure to control abnormal uterine bleeding or unexpected recurrence is an indication for curettage.
Precautions: As with all short acting estrogens, the following precautions should be observed:

A complete pretreatment physical examination should be performed with special reference to pelvic and breast examinations.

To avoid prolonged stimulation of the endometrium and breasts in climacteric or hypogonadal women, estrogens should be administered cyclically (3 week regimen with 1 week rest period—withdrawal bleeding may occur during rest period).

Because of individual variation in endogenous estrogen production, relative overdosage may occur which could cause undesirable effects such as abnormal or excessive uterine bleeding, mastodynia and edema.

Because of salt and water retention associated with estrogenic anabolic activity, estrogens should be used with caution in patients with epilepsy, migraine, asthma, cardiac, or renal disease.

If unexplained or excessive vaginal bleeding should occur, reexamination should be made for organic pathology.

Pre-existing uterine fibromyomata may increase in size while using estrogens; therefore, patients should be examined at regular intervals while receiving estrogenic therapy.

The pathologist should be advised of estrogen therapy when relevant specimens are submitted.

Because of their effects on epiphyseal closure, estrogens should be used judiciously in young patients in whom bone growth is incomplete.

Prolonged high dosages of estrogens will inhibit anterior pituitary functions. This should be borne in mind when treating patients in whom fertility is desired.

The age of the patient constitutes no absolute limiting factor, although treatment with estrogens may mask the onset of the climacteric.

Certain liver and endocrine function tests may be affected by exogenous estrogen administration. If test results are abnormal in a patient taking estrogen, they should be repeated after estrogen has been withdrawn for one cycle.
Adverse Reactions: The following adverse reactions have been reported associated with short acting estrogen administration:
nausea, vomiting, anorexia
gastrointestinal symptoms such as abdominal cramps and bloating
breakthrough bleeding, spotting, unusually heavy withdrawal bleeding (See DOSAGE AND ADMINISTRATION)
breast tenderness and enlargement
reactivation of endometriosis
possible diminution of lactation when given immediately postpartum
loss of libido and gynecomastia in males
edema
aggravation of migraine headaches
change in body weight (increase, decrease)
headache
allergic rash
hepatic cutaneous porphyria becoming manifest
Dosage and Administration: PREMARIN should be administered cyclically (3 weeks of daily estrogen and 1 week off) for all indications except selected cases of carcinoma and prevention of postpartum breast engorgement.

Menopausal Syndrome—1.25 mg. daily, cyclically. Adjust dosage upward or downward according to severity of symptoms and response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

If the patient has not menstruated within the last two months or more, cyclic administration is started arbitrarily. If the patient is menstruating, cyclic administration is started on day 5 of bleeding. If breakthrough bleeding (bleeding or spotting during estrogen therapy) occurs, increase estrogen dosage as needed to stop bleeding. In the following cycle, employ the dosage level used to stop breakthrough bleeding in the previous cycle. In subsequent cycles, the estrogen dosage is gradually reduced to the lowest level which will maintain the patient symptom-free.

Postmenopause—as a protective measure against estrogen deficiency-induced degenerative changes (*e.g.* osteoporosis, atrophic vaginitis, kraurosis vulvae)—0.3 mg. to 1.25 mg. daily and cyclically. Adjust dosage to lowest effective level.

Osteoporosis (to retard progression)—usual dosage 1.25 mg. daily and cyclically.

Senile Vaginitis, Kraurosis Vulvae with or without Pruritus—0.3 mg. to 1.25 mg. or more daily, depending upon the tissue response of the individual patient. Administer cyclically.
How Supplied: PREMARIN (Conjugated Estrogens Tablets, U.S.P.)

No. 865—Each *purple* tablet contains 2.5 mg., in bottles of 100 and 1,000.

No. 866—Each *yellow* tablet contains 1.25 mg., in bottles of 100 and 1,000. Also in unit dose package of 100.

No. 867—Each *red* tablet contains 0.625 mg., in bottles of 100 and 1,000.

No. 868—Each *green* tablet contains 0.3 mg., in bottles of 100 and 1,000. 7352

PREMARIN®

BRAND OF CONJUGATED ESTROGENS TABLETS, U.S.P.

CONTAINS ONLY NATURAL ESTROGENS ...NO SYNTHETICS OR SUPPLEMENTS

Ayerst

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GENERAL SURGEON, board eligible, married, desires to relocate in small town with good hospital. Good references, available anytime. Have Texas license. Please reply to Ad-498, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

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INTERNIST, certified, FACP, moving to ranch home near Marble Falls, September 1974. Needed: professional activity not requiring the opening of an office. Interests include writing. Please reply to Ad-509, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

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In one of the most desirable areas in the Texas Gulf Coast Area. Memorial City Professional Building, in the Memorial Drive-Spring Branch Area of Houston, Texas, has just completed a fifty-seven suite addition. The Professional Building now consists of one hundred twenty offices and is connected to a new two hundred thirty bed general hospital.

Over two hundred thousand people reside within a six mile radius of the Professional Building. The physician to population ratio is excellent to produce a rewarding private practice in virtually every specialty. Particularly attractive opportunity in cardiology avialable at this time.

Write or call Howard E. Troutt, Executive Director, Memorial City Medical Center, 902 Frostwood Drive, Suite 283, Houston, Texas 77024, (713) 464-2711.

Advertising Directory

Abbott	65
Ayerst Laboratories	124-125
Beverly Hills Hospital and Clinic	113
Blue Cross-Blue Shield of Texas	16-17
Burroughs Wellcome Company	36
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
The Diagnostic Clinic of San Antonio, P.A.	95
Doctors' Park, Denton	76
Dorsey Laboratories	42
El Paso Psychiatric Clinic	119
Russell Grace Insurance	76
Flint Laboratories	68
Ives Laboratories, Inc.	25
Mead Johnson Laboratories	69, 115
Kelsey-Seybold Clinic	88
Lakeway Company	85
Eli Lilly and Company	46
Marion Laboratories, Inc.	140-141
The Martin X-Ray and Radium Clinic	119
McNeil Laboratories	41
Medical Arts Clinic Association of Corsicana	114
The Medical Protective Company	95
Medicenter Psychiatric Hospital	96
Memorial City Medical Center, Houston	137
National Resort Communities	11-12
The Pharmaceutical Manufacturers Association	32-33
T. Rowe Price Growth Stock Fund, Inc.	28
Professional Office Buildings, Inc.	87
The Prudential Insurance Company of America	9
Psychiatric Institute of Fort Worth	15
Radiology Associates of Fort Worth	114
Reed & Carnrick	64
A. H. Robins Company	55-56
Roche Laboratories	1-2, 20-21, 30-31, 52-53, 120-121
Roerig	45, 117-118
Ryan Olds-Mercedes	54
Scott and White Clinic	Back Cover
Searle & Company	66-67
Seaview Hospital	122
Starlite Village Hospital	119
Surgical Mechanical Research, Inc.	96
Texas Medical Association	
Automobile Leasing Program	27
Memorial Library Fund	110
Orient Adventure	57
Scandinavian Adventure	3rd Cover
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	114
The Upjohn Company	4-5
Wallace Pharmaceuticals	28-29, 34-35
Warner/Chilcott	37, 122-123
Wichita Falls Clinic	28
Physicians' Directory	126-134
Classified Advertisements	135-136

Editorials

TMA-AMA URGE RESTRAINT IN RAISING FEES FOR SERVICE

Since April 30, physicians have been free to charge higher fees if they wish—at least as far as the Economic Stabilization Program is concerned.

It wasn't easy to keep the fees reasonable while business and all other costs gobbled bigger and bigger hunks of gross income. Since last November, the AMA has battled the Cost of Living Council in an effort to have controls on physicians' fees removed. Now it appears that the fight is won.

Can the physician now see himself as the proverbial victor to whom belong the proverbial spoils? Hardly.

It is true that there are instances in which immediate adjustments are justified—even essential. Physicians have done exceedingly well thus far in keeping down the costs of medical care. For example, from August 1971 through the end of 1973, the cost of living increased by almost 13.5%, while physicians' fees during that same period increased by less than 7.5%. Clearly, then, some increases already are overdue.

The other side of the fee-raising coin is that the patients who have to pay those higher fees are in an economic bind too, and they might be forced to postpone needed medical care. Physicians always have taken their responsibility to their patients quite seriously, and it is doubtful that they will change.

AMA Board of Trustees chairman Dr. Richard E. Palmer, in a letter to physicians, cautioned, "Impulsive action could seriously and irreversibly affect the health of the public, the future of the individual physician, and the nature of the medical profession."

If restraint is not used, and there are significant increases in physicians' fees, some in government already are advocating even more strict sanctions as part of a program of national health insurance.

Texas physicians undoubtedly will do their share to keep fee adjustments within a necessary and proper range, keeping in mind the interests of their patients and their profession as well as themselves.

AMA, AHA TRAVEL TOGETHER

While serving as president of the American Hospital Association, I have met with, heard from, and spoken to more physicians than I have in my previous 27 years in the hospital business, and I have come to understand the basic relationship between hospital administrators and physicians. It was summed up by the man who came out of a meeting and announced, "There is a true feeling of togetherness in that room. Everyone is reasonably unhappy."

And so we are. We are together in the business of providing health care services, and we are unhappy with each other as much as with anyone else.

The reason for our unhappiness has been articulated well by a man who had little or nothing to do with the problems themselves; the late Supreme Court Justice Louis Brandeis said, "Nine-tenths of the serious controversies which arise in life result from misunderstanding—from one man not knowing the facts which to the other may seem important, or otherwise failing to appreciate his point of view."

The major stumbling block to good rapport between administrators and physicians has been the hospital itself, or rather the perception each of us has about what the hospital is supposed to be. If we could agree on a single perception, I believe we could reduce the amount of friction and make a start at clearing up many of the problems.

For what it's worth, here is my perception of the hospital: The hospital is a place in which human, economic, and technical resources are gathered together and put to work providing health care services. A place, however, can do nothing on its own—it is human resources which make it work. The hospital, as a functioning entity, is a series of interrelationships between three groups—the administration, the medical staff, and the board of trustees. Unless all three groups are working together as a unified body, toward a common set of objectives, there is no unity in the hospital as such.

Disagreement over this concept of the hospital is where we get into trouble. There is a lot of "we-they." We the medical staff, they the hospital, and we the administration, they the medical staff.

There is one obvious reason for this attitude: the concept of cooperation has been preached but not practiced for too long. In too many hospitals, physicians have been excluded from membership on the governing board or other essential decision-making committees.

Both the American Hospital Association and the American Medical Association have said that such representation is desirable for the effective functioning of the hospital.

There has never been a taboo as such on physician representation on the AHA Board of Trustees; on the contrary, well over half of the 75 chairmen have been physicians. Nevertheless, we have been doing some soul-searching. In a report to the AHA membership last year, one of our special comittees noted that ". . . the association will have no leadership role of any consequence unless it can speak with a unified voice for its primary constituency, the health care institutions of our nation. It will not be able to do so if it does not serve its members as they perceive they should be served, if it does not pay attention to the voice of the membership, and if it does not seek support at the institutional level of the major elements of the hospital, the governing board, the executive staff, and the medical staff."

The report went on to say that "there are many charges of domination of association affairs by chief executive officers of health care institutions." "The physician," it added, "does not believe that he has any material role in the activities of the American Hospital Association and he tends to oppose or, at best, ignore AHA pronouncements."

We think we have found a way to help overcome this. A special category of delegate—the regional delegate—has been created. Each of our regional advisory boards will nominate one physician and one trustee for election as regional delegates. Our intention is to "enhance the probability of election to the board of trustees of members of the governing boards and medical staffs of member institutions." By this action the AHA has shown its commitment to physician representation in the decision-making process.

Many problems faced by hospitals are also faced by physicians, and vice versa. The AHA and AMA have recognized this. We are seeking to determine whether joint action is possible and, if so, desirable. When it is both, we have taken joint action. Where it isn't, we have at least listened to each other. The honest discussions have led both organizations to reevaluate their attitudes and practices.

Going back to the thought expressed by Justice Brandeis—that most controversy results from misunderstanding, from failure to appreciate another's point of view—our two national associations are in the process of listening to each other and reacting to each other's viewpoints. I hope that this will lead to joint action on national issues which affect us both.

Regardless of how successful this may be, it is not enough. What the two associations may agree to say about the Economic Stabilization Program before the Cost of Living Council is not going to have much effect on in-hospital disputes which may arise out of ESP. Resolving these controversies will be the responsibility of the administration, medical staff, and, to a degree, the county medical society and the local hospital association. It will require communication, understanding, and for all of us, a willingness to put ourselves in the other guy's shoes.

Horace M. Cardwell, Chairman, Board of Trustees, American Hospital Association.

Condensed from the *Dallas Medical Journal*, March, 1974.

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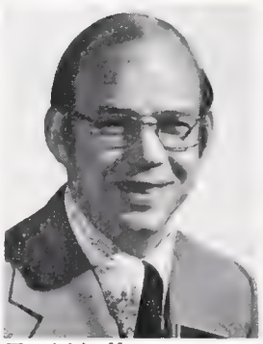
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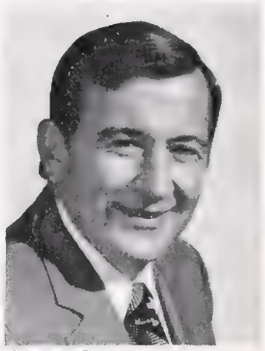
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Communication, legislation, education can solve medicine's foremost problems

As we contemplate the year ahead several factors emerge to capture our attention:

1. There is a continued erosion of the responsibilities, prerogatives and, indeed, civil rights of physicians by government intrusion in medical affairs.

2. The practitioners of medicine have divided themselves into groups having special interests and goals, with a resulting loss of emphasis on the development of a strongly united profession.

3. Last year Americans spent more than $80 billion in an attempt to stay alive and well, with no significant reduction in mortality rates.

In seeking reasons for these, one may arrive at various conclusions, among which I submit the following:

1. Legislators attempt to solve problems by enacting laws and providing funds. Civil service planners then interpret the laws and determine the methods of administration and application of such legislation according to their own philosophy of government, often with disastrous results.

2. Specialization has fragmented the medical profession to a degree of disunity which has seriously impaired our voice in socioeconomic affairs. Just as our country seems to be unsure of a national purpose, we in medicine are not pursuing, with any significant degree of unity, the goals necessary for realizing our potential in delivering medical care.

3. All of the knowledge, materials, and procedures available to the American people should enable them to maintain the highest state of health in the entire world. Somewhere there has been a failure to motivate people to utilize these resources for the purpose of improving their own physical conditions.

Each of these items is a major factor in the medical scene for the future, and we must seek diligently to find methods of solving the problems pertaining to them. We can begin by communicating more extensively, more effectively, and more frequently with each other.

Then we can become involved with the legislative process, both in Austin and Washington. Finally, we must develop a public education program to indoctrinate and motivate people to assume some responsibility for their own well being.

E. W. Schmidt, M.D.

E. W. Schmidt, MD, President, Texas Medical Association.

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Texas Medicine

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Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia in elderly patients on diuretics, primarily thiazides. Sore throat, fever, pallor or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. Data are insufficient to recommend use in infants and children under 12.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, allergy or bronchial asthma; and in those with glucose-6-phosphate dehydrogenase deficiency, where hemolysis may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

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Dosage: Not recommended for children under 12.

Usual adult dosage: Two tablets b.i.d. for 10 to 14 days. For patients with renal impairment:

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Contents

SCIENTIFIC ARTICLES

41 Percutaneous renal biopsy
Lt Col Robert E. Lordon; Col Alfred L. Thompson, Jr.

46 Managing the severely ischemic lower extremity
Dr. Robert N. McGehee; Dr. Richard T. Padula

61 Outpatient surgery
Dr. Linda C. Stehling; Dr. Howard L. Zauder

66 Use of automatic staplers in vaginal hysterectomy, anterior colpoplasty, and posterior colpoperineoplasty
Dr. Richard O. Albert

79 Cholecystectomy aid
Dr. Inayat I. Lalani

80 Quiz: Alcoholism
Dr. Gilbert E. Corrigan

EDITORIALS

112 Outpatient surgical centers offer economy and efficiency
Dr. Hugh F. Rives

114 A look at the AMA meeting
Dr. E. W. Schmidt

FEATURE

82 To the Netherlands and back again: a fair exchange

NEWS

6 Nelson elected to AMA board

8 TMA fall conference set

10 Assessment due

10 Economic stabilization office established

13 Implementation to vary for recertification

13 UT budget

13 MD mail

16 Influenza research center

16 C/F grant

16 Med students view rural practice

17 Ford grant to Baylor

17 Bus shipment recommended for rabid heads

17 Pathologists oppose mandatory recertification

17 UT Dallas receives grant

17 Radiology lectureship

18 Rural health project

18 New HEW division

DEPARTMENTS

19 Capital Comments

25 Continuing Education

28 Information for Authors

35 Coming Meetings

87 Medicine and the Law

89 Medical Newsmakers

91 Medicine in Literature

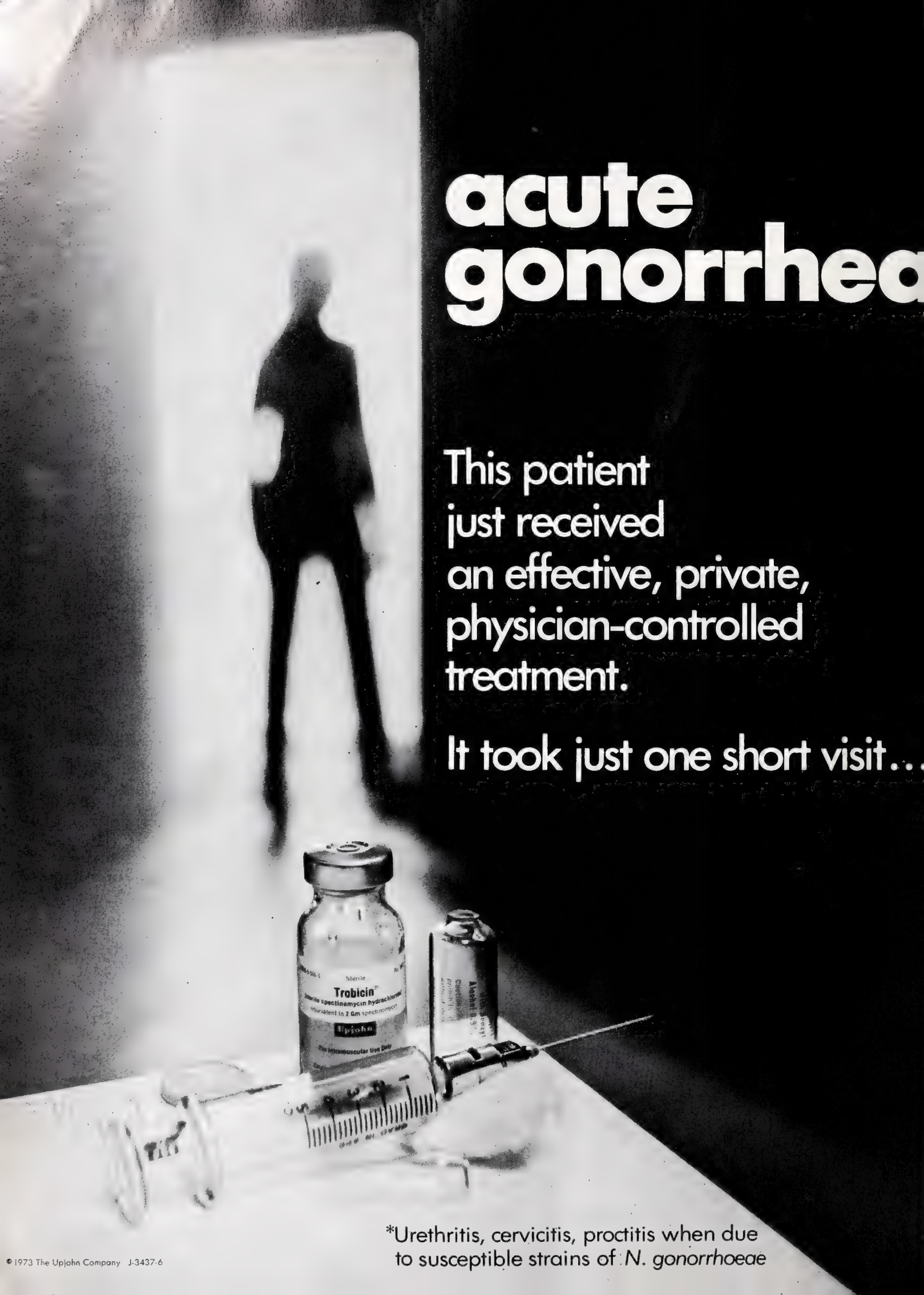
93 Recent Deaths

ON THE COVER

The "demon in the bottle" theory is as old as alcoholism, and both are still around. Alcoholics and their families still need someone to help them through difficult times, and often they turn to the physician. The short quiz on page 80 may remind you of things to consider in trying to identify and assist these people.

NEXT MONTH

Winners of *Texas Medicine's* annual award for excellence in scientific writing will be published in the September issue, along with an article on how to increase your reading efficiency and one on Project Grass Roots Organization. Also, there will be a story on medical practice in a small community, and a physician's report on travels to South America.



*Urethritis, cervicitis, proctitis when due to susceptible strains of *N. gonorrhoeae*

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Once Trobicin is injected, treatment is usually complete; there can be no problems with patients sharing, skimping, skipping or forgetting medication.

Trobicin—The aspect of privacy.
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Trobicin—Indication and dosage.
Spectinomycin is indicated only for use in acute urethritis and proctitis in the male and acute cervicitis and/or proctitis in the female when due to susceptible strains of *N. gonorrhoeae*. The usual dosage for Trobicin in adult males is 2 grams intramuscularly†; 4 grams intramuscularly in females.

Trobicin—Not effective for syphilis.
Trobicin is not effective for any stage of syphilis. Trobicin may mask or delay the symptoms of incubating syphilis. If concurrent syphilis is suspected, follow the patient serologically for at least 3 months. Patients with syphilis should receive adequate specific anti-syphilitic therapy with an appropriate antibiotic.
Trobicin is contraindicated in patients previously found hypersensitive to it.

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2 gm vials containing 5 ml when reconstituted with diluent.
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An aminocyclitol antibiotic active *in vitro* against most strains of *Neisseria gonorrhoeae* (MIC 7.5 to 20 mcg/ml). Definitive *in vitro* studies have shown no cross resistance of *N. gonorrhoeae* between spectinomycin and penicillin.

Indications: Acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

Contraindications: Contraindicated in patients previously found hypersensitive to spectinomycin.

Warnings: Not indicated for the treatment of syphilis. Antibiotics used to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Patients should be carefully examined and monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected.
Safety for use in infants, children and pregnant women has not been established.

Precautions: The usual precautions should be observed with atopic individuals.
Clinical effectiveness should be monitored to detect evidence of development of resistance by *N. gonorrhoeae*.

Adverse reactions: The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.
During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single- and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

Dosage and administration: Keep at 25° C and use within 24 hours after reconstitution with diluent.

Male—Inject 5 ml intramuscularly for a 2 gram dose. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.

Female—Inject 10 ml intramuscularly for a 4 gram dose.

How supplied: *Vials, 2 and 4 grams—with ampoule of Bacteriostatic Water for Injection with Benzyl Alcohol 0.9% w/v.* Reconstitution yields 5 and 10 ml respectively with a concentration of 400 mg spectinomycin per ml (as the hydrochloride). For intramuscular use only.
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† For patients with gonorrheal proctitis and for patients in geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams is preferred.

NEWS

Dr. Nelson elected to AMA Board of Trustees; House of Delegates acts on Texas resolutions

The election of Dr. Joe T. Nelson, Weatherford, to a one-year term on the AMA Board of Trustees highlighted activities for the Texas delegation at the 123rd annual convention of the American Medical Association June 22-27 in Chicago. Eleven candidates were nominated for six places on the AMA board.

Dr. Nelson has served as a Texas delegate to the AMA since 1969, and was chairman of the delegation at the time of his election. He has served as a member of the AMA Council on Legislation, and was a member of the Board of AMPAC.

A member of the TMA Board of Trustees and the Board of Regents of The University of Texas System, Dr. Nelson is the immediate past president of the Southern Medical Association.

In addition, honors were accorded to other Texas physicians during the meeting. Dr. R. Lee Clark, president of The University of Texas System Cancer Center in Houston, received the 1974 Dr. Rodman E. Sheen and Thomas G. Sheen Award, presented annually to a physician for scientific accomplishment. The award consists of a $10,000 stipend and a plaque. Dr. Clark has devoted his career to clinical research, diagnosis, and treatment of cancer, and cancer education.

Dr. Robert Mayo Tenery, Waxahachie, was honored upon completion of eight years of service to the AMA Council on Constitution and Bylaws. Among his many activities, Dr. Tenery is a past president of TMA.

Dr. Charles N. Verheyden, Jacksonville, now a resident in general surgery at the Mayo Graduate School of Medicine, Rochester, Minn, was elected as the intern and resident member of the AMA Council on Medical Education. Dr. Verheyden was nominated by the Texas and Minnesota delegations.

Professional Standards Review Organizations was a major topic receiving the attention of the AMA delegates. The House went on record with a definitive policy statement to direct its efforts to achieve constructive amendments to the PSRO law. In addition, the AMA has taken the position that it "believes it unwise to commit the resources of the Association to an inflexible course in seeking repeal" of PSRO provisions of PL 92-603.

The House adopted the policy statement after consideration of two

reports and 24 resolutions including two from Texas. One Texas resolution called for the AMA to exercise all possible courses of action to counter PSRO, including intensive efforts for repeal, amendment, deletion or substitution of PSRO provisions of PL 92-603. The other Texas resolution proposed the commendation of 30 members of Congress for introducing or co-sponsoring bills calling for repeal of PSRO. Neither was adopted by the AMA House.

Other actions by the AMA House of Delegates included the adoption of three Texas resolutions, the referral of two for further study, and the incorporation of the views expressed in two others into substitute resolutions.

Acting favorably upon a Texas resolution, the AMA has recommended that conferences and programs on socioeconomic subjects be made available to medical students. The Texas resolution pointed out that medical students could profit by more adequate formal training in the mechanics and socioeconomic implications involved in the various forms of prepaid health insurance plans, including Medicare and Medicaid; the business aspects of managing a medical practice; professional relationships with other physicians; and the value of participating in medical society activities.

The AMA adopted a Texas recommendation that radioactive materials destined for immediate medical use be shipped under strictly enforced, existing federal regulations which guarantee actual low potential hazard so that scheduled passenger airlines may continue to carry the materials without objection. As a result of the approval of the Texas resolution, the AMA will present the recommendation to appropriate federal agencies to assure its implementation.

Another Texas resolution, introduced originally in December 1973, called for the AMA endorsement of the use of the condom as an effective method of prevention of venereal disease. The resolution was approved on the basis of the epidemic proportions of gonorrhea and the need for all practical and legal methods of prevention and spread of VD.

The Texas resolution regarding training for family and primary care physicians has been referred to the AMA Council on Medical Education. The resolution expressed concern that the new program of flexible and categorical internships which will go into effect on July 1, 1975, will not adversely affect the training of physicians for the pri-

NEWS

mary care fields. Under this plan, freestanding rotating internships are scheduled to be discontinued next July, placing almost all training programs under the direction of medical schools. The Council will have a responsibility to submit a full report on the new program of flexible and categorical internships at the 1974 AMA Clinical Convention in late November.

The AMA Council on Medical Service has been directed to devote further consideration to complaints by some Texas doctors that Aetna Life and Casualty continues to send letters to patients in instances when the fees of physicians exceed the amounts which the company calculates as the "prevailing" fees. The Texas resolution pointed out that these letters imply to the patient that the fee of the physician is unreasonable. This has caused loss of patient confidence in his doctor and in the physician-patient relationship.

Acting upon a report of the AMA Board of Trustees and a Texas resolution which pointed out that more than 300,000 persons in the United States die suddenly each year, predominantly from coronary artery disease, the AMA has urged all physicians to become proficient in basic cardiopulmonary resuscitation.

Another Texas resolution asked that the AMA Council on Medical Education be composed of equal numbers of medical educators and physicians in private practice who may or may not hold clinical appointments at a medical school. While the House did not adopt the resolution, the delegates did adopt a substitute resolution. This resolution stipulated that information on the current status of physicians who are nominated for the Council, with reference to faculty appointments, salaried positions in education, and percent of time devoted to private practice, be made available to the House of Delegates.

A final Texas resolution asked that the

Dr. R. Lee Clark (left) of Houston is presented the Dr. Rodman E. Sheen and Thomas G. Sheen Award by Dr. Russell B. Roth, AMA president.

"conflict of interest" doctrine be abolished from federal utilization review requirements. The Texas delegation pointed out that this doctrine applies to hospitals or nursing homes in some areas in which the staff may consist of less than two physicians and be relatively isolated by geographical location. Although concerned with the ability of certain institutions to properly carry out required utilization review, the House did not adopt the Texas resolution stating that in many areas of the country where the conflict could arise, physicians have made arrangements with the appropriate county medical society for conducting the review. The AMA expressed the opinion that this is an established mechanism for resolving the problem.

TMA fall conference set for Sept 21

The 1974 Texas Medical Association Fall Conference on Medical Service and Practice Management is set for Sept 21 at the Joe C. Thompson Conference Center in Austin.

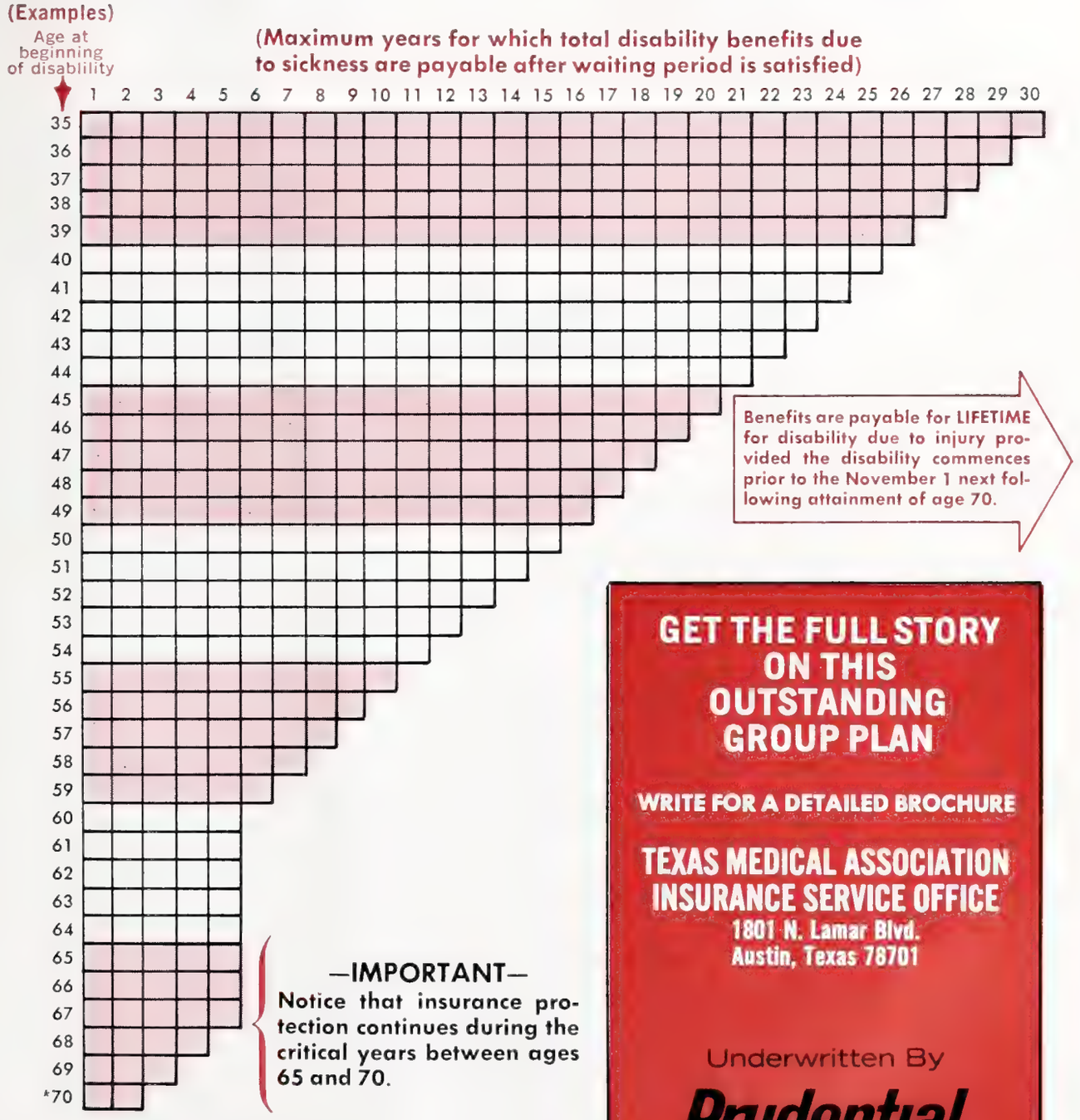
The morning session of the day-long meeting will focus on the problems of medical service including national health insurance, health maintenance organizations, professional standards review organizations, fee profiles, and others.

The afternoon session will center on

HOW LONG IS LONG TERM?

a good question when considering DISABILITY INSURANCE

The TEXAS MEDICAL ASSOCIATION Disability Income Plan pays to age 65 for total disability due to sickness which originates prior to age 60. After age 60, the maximum benefit period is 5 years. The following chart illustrates the maximum sickness benefit period at various ages.



* Providing disability occurs prior to November 1 next following attainment of age 70.

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NEWS

practice management with such topics as the problem oriented medical record, expense ratios in medical practice, financial management, and pension and retirement plans. Following the speakers, physicians will be able to participate in round table discussions on the individual topics presented.

The conference activities will also include the presentation of the TMA distinguished service award to Dr. Harvey Renger of Hallettsville. Complete conference details will be carried in the September issue of *Texas Medicine*.

Assessment to finance actions supporting doctors' rights

The majority of regular and provisional members of the Texas Medical Association received a headquarters mailing during the first part of July regarding the payment of the $100 assessment approved by the House of Delegates during its regular session in May. Several county medical societies elected to contact local members directly for collection of the assessment due by Sept 1.

The assessment will be used for activities which are consistent with the goal of providing the best possible medical care to the people of Texas.

In a letter to physicians of Texas, Dr. Ed W. Schmidt, TMA president, and Dr. John M. Smith, Jr., chairman of the Board of Trustees, said, "Never before have your rights and privileges as a physician been challenged more strongly. Legislation before Congress and the State Legislature, regulations promulgated by government, and irrational, undocumented attacks by so-called consumer advocates are real threats to physicians in their dedication to provide the highest quality of medical care to their patients."

The letter also stated, "The Texas Medical Association is taking the Secretary of HEW to court on PSRO. The Delegates voted to 'exercise all possible courses of action to counter PSRO through intensive efforts for repeal, amendment, deletion, or substitution' of the law. The Association will move aggressively to preserve the rights of physicians through legal action, through legislation, and through informational programs for the profession and for the public. To assist you in dealing with third-party fiscal intermediaries and with government, the Texas Medical Foundation is developing an 'in-house' review and utilization program."

Detailed information on the assessment accompanied the letter to the TMA membership. A breakdown of the utilization of the assessment is as follows: $10, legislative action; $24, legal action; $28, public and professional education programs, and $38, utilization and peer review system.

Economic stabilization office established at national level

John D. Twiname, administrator of the Office of Health of the Economic Stabilization Program, has announced the establishment of an Office of Economic Stabilization.

Effective June 30, the new office will make rulings on compliance, negotiate settlements, and process retroactive exception requests for those closed fiscal years under controls.

In a letter to health administrators, Twiname said that hospitals were increasingly effective in their efforts to contain and manage costs. "The alarming 14 and 15% annual increases in costs per day of care (adjusted) before 1971 were brought down by more than a third to almost 9% in 1973, the lowest increase rate since 1965."

For those completed years under controls, Twiname continued, third party payers could properly question final payment amounts.

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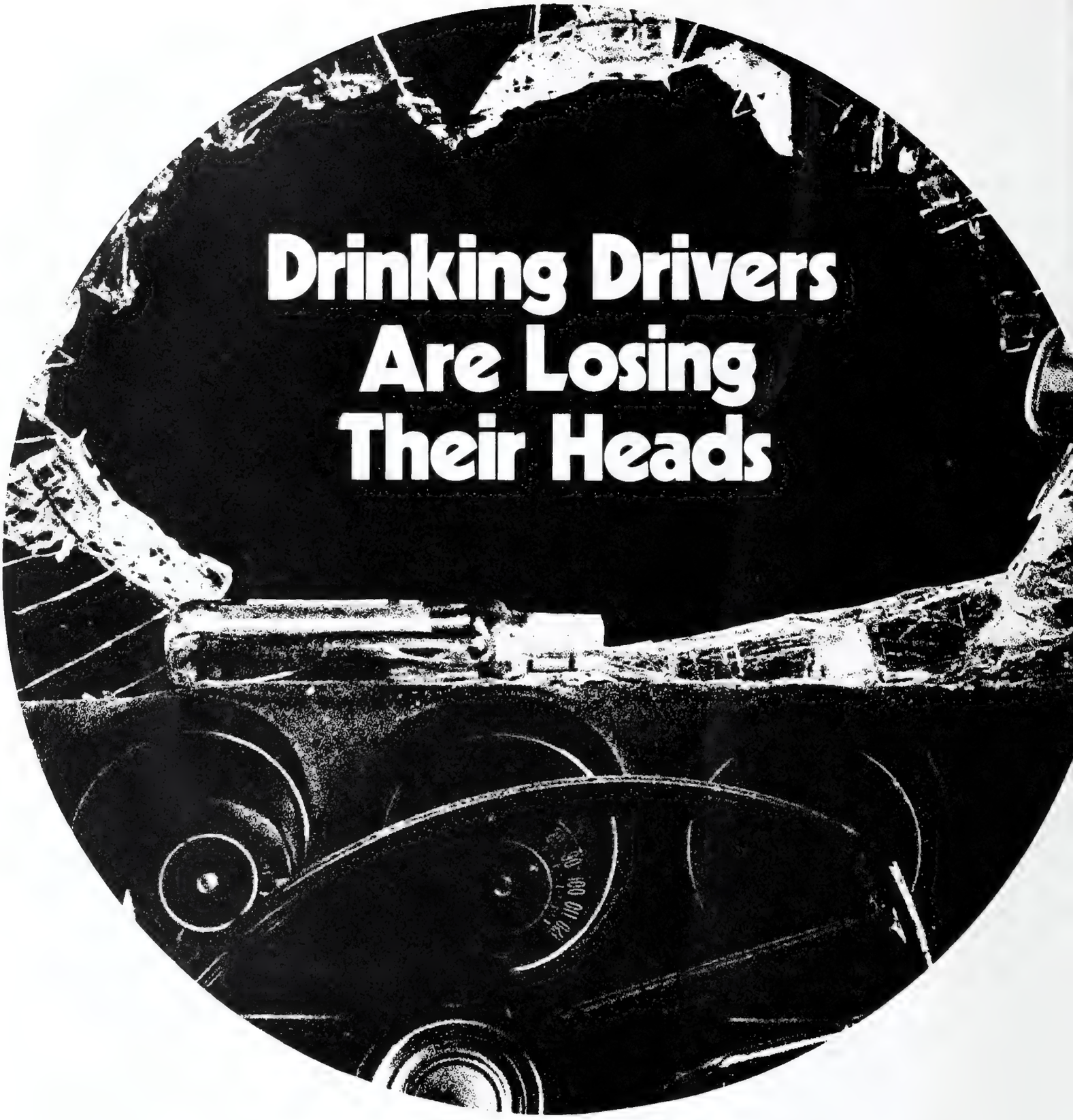

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Implementation to vary for recertification

An update has been received regarding the approval of the concept of voluntary periodic recertification by medical specialty boards as reported in the June issue of *Texas Medicine*.

Dr. John C. Nunemaker, executive director of the American Board of Medical Specialties, said that all 22 member specialty boards have now approved the concept.

Dr. Nunemaker said, however, that implementation plans for the boards vary greatly. Only a few boards at this time have adopted a plan to offer written examinations. Tentative dates for these have been set in the late 1970's. The other boards will be conducting studies on the concept of recertification to determine modes of action. Such studies are expected to continue for several years.

Regents approve UT budget

The University of Texas System Board of Regents have approved 1974-75 budgets totaling $408,322,168 for System administration and 12 component institutions in the UT System. Of this amount, $200,271,667 has been designated for the UT health related institutions.

Included in the total is a 3.4% across-the-board salary increase provided by the Legislature for all faculty and staff.

Additional funds for UT Austin, UT Arlington, and UT El Paso were made available through the Coordinating Board for the purpose of granting an additional 3.4% salary increase to faculty currently being paid at academic rates less than $15,000.

The total budgeted figure represents about a 10% increase over the 1973-74 budget of $371,544,170.

Included in the new budget which goes into effect Sept 1 are $272,922,869 from educational and general funds (general revenue, fees, and Available University Fund support); $28,887,619 from auxiliary enterprises (food, housing, and athletic events); $39,465,234 from current restricted funds (grants and gifts), and $67,046,446 from sponsored research and services (government and private contracts).

A unit-by-unit breakdown of the UT health related facilities includes: $28,863,076, Dallas Health Science Center; $58,344,792, Galveston Medical Branch; $6,592,612, Sealy and Smith Foundation Hospitals; $27,927,716, Houston Health Science Center; $23,582,393, San Antonio Health Science Center; $50,291,538, University Cancer Center; $4,669,540, System Nursing School.

MDs receiving less medical mail

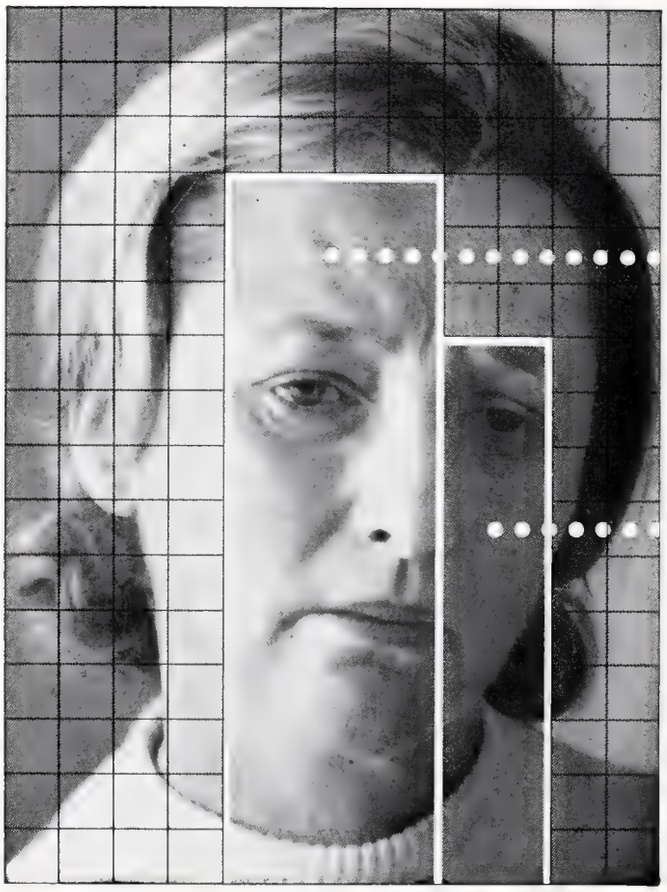
The typical busy physician receives an average of four pieces of medical mail per day, probably less than his other commercially oriented mail, according to the Pharmaceutical Manufacturers Association (PMA).

"This represents a 38% decline since 1959," C. Joseph Stetler, PMA president, said, "and negates any claim that such mail is proliferating. Actually, through the use of the computer and other techniques, medical mail today is much more selective and efficient; the circulation of an average mailing dropped to less than 20,000 in 1973 compared to an average of 55,000 in 1959."

Although some mail irritates some doctors some of the time, a 1973 industry study disclosed that the average exposure score in 13 tests was 54%, with some pieces being seen by as many as 76% of the addresses, the PMA president stated. Another study, based on 5,400 observations, showed that perusal of direct mail accounted for 1.8 to 3.9 hours of the doctor's time each week.

Stetler said that medical mailing

Both often



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

respond to one

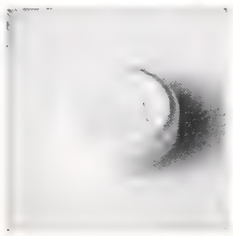
According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.



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in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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houses, which offer physicians opportunities to be removed from lists, report that such requests annually run to fewer than 3,600 out of a total 320,000 physicians.

Sharply increasing costs for paper, printing, copywriting, design, royalties, and handling charges have also contributed to a decline in the volume of direct mail, Stetler pointed out. Third class postage alone has gone from $20 per thousand in 1959 to $63 per thousand in 1974 or an increase of 315%. Yet the dollar cost of direct medical mail is only 26% higher than the comparable figure in 1959.

NEWS

Research center to study influenza

The National Institute of Allergy and Infectious Diseases (NIAID) of the National Institutes of Health has awarded a $2.8 million contract to Baylor College of Medicine for the establishment of a multidisciplinary research center to study influenza in man. The center will serve as a national focus of research efforts to find answers to the many questions surrounding influenza.

The ultimate goal of the center, which is expected to continue federally-supported operation for eight to ten years, is to define the approaches and develop the methods necessary for the prevention of influenza. The operational approach to achieve this goal will involve the performance of diverse but interrelated research projects in the areas of epidemiology, pathogenesis and immunology, and vaccine evaluation and viral chemotherapy.

Dr. Robert B. Couch, director of the Influenza Research Center, said that a new pandemic, or worldwide strain of influenza virus, is expected to appear in the next four to five years, and one of the goals of the research center is to better prepare for and possibly prevent the next pandemic.

Baylor was the only institution to receive a contract on the basis of nationwide competition involving 14 institutional centers.

Grant supports research into cause of cystic fibrosis

A three year project grant from the National Institutes of Health will enable researchers at The University of Texas Medical Branch to conduct in depth research on a substance linked to the cause of cystic fibrosis. First year funding on the grant amounts to $253,207.

The grant calls for five project areas of investigation on the suspect C/F substance, known as the ciliary inhibitor or simply the C/F factor. The UTMB researchers are attempting to establish the role of the ciliary inhibitor in some yet unknown malfunction in cystic fibrosis patients that causes the accumulation of mucus in the pulmonary system.

Medical students view rural practice

Members of the Family Practice Club at The University of Texas Medical School at Houston had a chance to see firsthand some of the realities of practicing in rural communities during a recent field trip to central Texas.

Eighteen medical students made the trip in late May to Eagle Lake, Columbus, and LaGrange to meet with area physicians and tour several types of health care facilities. The group also included husbands and wives of 14 of the students.

The trip was cosponsored by the Texas Academy of Family Physicians, which furnished transportation for the group. Meals and lodging for the students were financed by members of the Academy in their respective hometowns.

A second trip to another region of the state is being planned for the near future.

Baylor receives Ford Foundation grant

Baylor College of Medicine has received $499,013 from the Ford Foundation to help continue research and training in reproductive physiology.

The focus of the research is the development of new, safer, and more efficient male and female reproductive contraceptives.

The Ford Foundation funds will be available over a five year period. The money will also help finance studies searching for the causes and control of cancer in reproductive organs and tissues, what causes the aging of human tissues, investigations into embryo growth and birth defects, and causes of human infertility.

Bus service recommended for shipment of rabid heads

The Texas State Department of Health, experiencing difficulty in confirming diagnoses of rabies, has recommended the use of the various bus companies for shipment of animal heads to the department's laboratory service in Austin.

According to the department, submission of animal heads for rabies examination takes as long as four days between the air shipping date and receipt.

The following directions for packing and shipping are suggested by the department.

Pack the animal head in a leak-proof plastic bag. Enclose a second leak-proof plastic bag filled with ice or use water frozen in plastic bottles. An outside container of sturdy construction (styrofoam serves well and is inexpensive) must be used. Also, use packing material to absorb water in the event of leakage. The box lid should be securely taped down and marked, "Keep upright, please." A note to telephone the Health Department Laboratory (454-3781 ext 313) on arrival, should be prominently displayed.

Pathologists oppose mandatory recertification

The Texas Society of Pathologists, during its regular business session on May 12, passed the following:

"Resolved: That the Texas Society of Pathologists is in favor of a voluntary program of documented continuing education, but is opposed to mandatory recertification in any form."

Copies of the resolution have been sent to the American Society of Clinical Pathologists, the College of American Pathologists, the American Board of Pathology, and the American Medical Association Committee on Continuing Education.

Dallas health science center given funds for special study

A $115,000 grant in neurobiology and bioengineering has been awarded to The University of Texas Health Science Center at Dallas by the National Institutes of Health's Food and Drug Administration.

The grant, "Vestibulo-Cochlear Effects of UHF-Microwave Radiation," is to study the effects of ultra high frequency microwaves on the inner ear and the body's system of balance. A new facility is to be equipped and staffed this summer to carry out the three-year investigative program.

Radiology lectureship established at UTMB

The Wayne V. Ramsey Lectureship in Radiology has been established at The University of Texas Medical Branch at Galveston by the late physician's family.

The lectureship will enable the Medical Branch to host visits by authorities in radiology, physics, nuclear medicine, radiation biology, and other areas in electronic technology.

Dr. Ramsey, a pioneer in radiology in Texas, is also credited with advanced

NEWS

work in bringing blood transfusions to West Texas. In addition, he was a frontiersman in another aspect of medicine by specializing in dermatology while that field was very young in Texas.

Mrs. Ramsey and two sons, Dr. Wayne V. Ramsey, Jr. and Dr. Jack D. Ramsey, are responsible for the creation of the lectureship.

RMPT project identifies rural health programs

The rural health project of the Regional Medical Program of Texas has identified 1,040 programs in 221 Texas counties, with populations of less than 50,000, which address the problems of rural Texans.

Conducted under the auspices of the Texas A&M University Agricultural Extension Service, the project listed the programs, their parent organizations and agencies, and an assessment and description of each. Statistical data has been compiled on the programs and the areas served. The list includes federal and state agencies, professional organizations, and voluntary and civic agencies. Of 154 agencies surveyed, 148 responded.

Of the respondents, 117 reported they had programs or information pertinent to the study.

The project's report is being published for distribution.

HEW organizes new regional division

A new division, Long-Term Care Standards (LTCS), has been organized in the Regional Office of the Department of Health, Education and Welfare.

The purpose of the division, according to HEW, is to ensure that safety and health care standards are being met by nursing homes and other institutions participating in Medicare and Medicaid programs. The division is responsible for the enforcement of federal standards for skilled nursing facilities and intermediate care facilities.

Under the regulations, LTCS has authority to enter into and/or terminate agreements with long-term care facilities. The unit works closely with state Medicaid agencies and state survey agencies.

The division is located in the Federal Building, 1100 Commerce, Dallas.

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment media	Original price 9-30-68	Current adjusted price 5-31-74	% Change from 9-30-68
Mercantile National Bank Stock Fund	$10.25	$ 9.16	−10.63
Loomis-Sayles Capital Development Fund	14.20	12.40	−12.67
T. Rowe Price Growth Stock Fund[2]	25.93	12.38	− 4.55
Loomis-Sayles Mutual Fund	16.82	16.94	+ .71
Stein Roe & Farnham Balanced Fund	23.34	22.80	− 2.31
Mercantile Bank Fixed Income Fund	10.00	11.03	+10.30
Standard & Poor 500 Stock Average	101.34	87.28	−13.87
Dow Jones Industrial Average	935.79	802.17	−14.28

[1]Includes accumulated dividends and capital gains since 1968.

[2]Stock split two for one, May, 1973.

CAPITAL COMMENTS

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

AUSTIN: The Constitutional Convention has adopted the style and drafting report on the medical practitioners section of the proposed Constitution. The new Article X, Section 18, Practitioners of Medicine, reads, "The legislature shall pass laws to prescribe the qualifications of practitioners of medicine and to punish persons for malpractice. No preference may be given by law to any schools of medicine." The committee report recognized that this section in the current Constitution has had substantial content added to it by judicial interpretation. The section's meaning is preserved, but the style was made consistent with the remainder of the proposed new Constitution. Other action on the general provisions section relating to health care changed, on third reading, a section which referred to access to health care. The sponsors stated that the purpose of this section was merely to provide a goal and not a mandate of action. Some members voiced a concern as to the previous language and the convention changed the section to read, "The state subscribes to the goal that every resident should have access to adequate comprehensive health care as may be provided by law." The author of the change was Sen Walter Mengden of Houston.

AUSTIN: Gov Dolph Briscoe recently appointed Dr. Jaime Quintanilla, Amarillo, and Dr. Robert L. Rock, Austin, to the Advisory Commission on Early Childhood Education. In addition, Dr. Aram Glorig, Dallas, has been appointed to the Interim Committee to study the education needs of deaf or visually handicapped students, and Dr. Lester E. McGary, Corsicana, and Dr. Russell L. Deter, El Paso, have been appointed to the Citizens Advisory Committee of the Joint Committee on Reforms in the Prison System of Texas.

WASHINGTON: The following bills have been introduced to repeal the Professional Standard Review Organization section of PL 92-603 by Texas Congressmen: HR 13358 by Bob Casey, Houston, and Omar Burleson, Anson; HR 11444 by James M. Collins, Dallas; HR 12304 by Henry B. Gonzalez, San Antonio; HR 13604 by Bill Archer, Houston; HR 13782 by Robert Price, Pampa; HR 14176 by O. C. Fisher, San Angelo; and HR 15192 by Richard White, El Paso; O. C. Fisher, San Angelo; Olin E. Teague, Bryan; James M. Collins, Dallas; Dale Milford, Grand Prairie; W. R. Poage, Waco; and Wright Patman, Texarkana.

WASHINGTON: HR 15090 by Rep Omar Burleson of Texas and others, has been introduced to amend certain objectionable sections of the PSRO section of PL 92-603. Among other things, this bill amends the law in the following respect: 1) Places the Public Health Service in Veterans Administration institutional care under PSRO. 2) Allows the Secretary of Health, Education and Welfare to establish or revise PSRO areas after consultation with appropriate professional associations representative of doctors of medicine or osteopathy, and county medical associations and specialty societies. Provides for statewide PSRO with total review function. It provides that the Secretary of HEW, upon making designations or revisions, will provide a statement of his rationale for the determination. It provides for a review of an HEW decision in court on the basis of arbitrary action.

3) Provides that a private non-profit corporation, including a medical foundation, may be designated by a state medical society of any state to be a PSRO. 4) It extends to July 1, 1978, the date at which the Secretary of HEW can enter into a PSRO contract with non-qualified organizations not composed of doctors. 5) Provides for study by the National PSRO Review Council prior to June 30, 1977, as to whether organizations other than non-profit corporations whose members are doctors should be permitted to do professional standards review. 6) Provides for PSRO on a sampling basis where advisable. 7) Deletes the current requirement that each PSRO determine and publish the types and kinds of cases upon which the PSRO will exercise authority. 8) Deletes the section that relates to inspection of records of a practitioner or provider, and facilities in which care is rendered. 9) Adds to the PSRO law the Public Health Service and Veterans Administration hospitals, but allows for differences in the types of patients served and the choice of sites for care available within those systems. 10) Removes the word "norms" and substitutes "guides" in services for various illness or health conditions. 11) Allows due consideration and the use as guides of criteria of care identified or developed by the national medical specialty organizations provided, however, such guides are not substituted for the medical judgment of individual physicians in the delivery of health care services. Further, no such guide could be applied to any civil litigation as evidence of the standard of proper medical care with respect to any treatment in the absence of competent medical testimony. 12) Substitutes the word "guides" for "norms" in the reports required by the National PSRO Council. 13) Amends authority of professional standards review council to only bring charges for substantial violations with due process conference hearings in an attempt to gain compliance. 14) Amends the sanction section to limit HEW to a suspension of not more than 30 days if no previous imposition of sanctions has occurred. 15) Deletes a section that could extend liability to physicians in other areas beyond Social Security in relation to norms, criteria, and standards. 16) Certain sections of the Social Security Act are repealed relating to retroactive denial and presumption of compliance. 17) Adds to the reimbursement of expenses of PSRO cost incurred in the course of litigation and judgment. 18) Strengthens the prohibition against disclosure of information by the PSRO to insure confidentiality, and 19) Provides for permission by HEW to contract with state medical societies or local medical societies to provide technical or other assistance in relationship to PSRO.

WASHINGTON: The Utah Professional Standards Review Organization has been awarded a $950,000 contract to conduct PSRO review functions over the next 18 months. The Utah organization became the nation's first conditional PSRO. The Department of HEW announced that 100 additional contracts were executed before the end of June. These included contracts for conditional PSROs, planning grants, and PSRO support centers.

WASHINGTON: There is a tremendous amount of testimony on National Health Insurance being offered in Congressional hearings. Hearings are being conducted by the House Ways and Means Committee and the Senate Finance Committee. Among the various organizations testifying, the National Medical Association, an organization representing 6,000 black physicians, opposed the "total federal financing and control of health care in this country which we feel would result in the enactment of HR 13870, the Kennedy-Mills bill in its present format."

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Dermatology
Title: Dermal Pathology
Sponsors: UT Health Science Center at Houston
Location: Shamrock Hilton Hotel, Houston
Date: Aug 19-23, 1974
Fee: $200
Designed for: Pathologists and Dermatologists
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, PO Box 20367, Houston 77025

Medical Electronics
Title: Clinical Applications of Medical Electronics
Sponsors: Texas Tech University School of Medicine; Texas Tech University College of Engineering, Lubbock
Location: Texas Tech University School of Medicine, Lubbock
Date: Aug 2-4, 1974
Contact: Dr. Orene W Peddicord, Coordinator, Continuing Medical Education, Texas Tech University School of Medicine, PO Box 4569, Lubbock 79409

Obstetrics and Pediatrics
Title: Perinatal Medicine
Sponsor: University of Colorado School of Medicine
Location: Snowmass-at-Aspen, Colo
Date: Aug 12-16, 1974
Fee: $160
Designed for: Practicing obstetricians and pediatricians
Contact: Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 E Ninth Ave, Denver, Colo 80220

Obstetrics and Gynecology
Title: Pathology in Gynecology and Obstetrics
Sponsor: University of Colorado School of Medicine
Location: Estes Park, Colo
Date: Aug 24-29, 1974
Fee: $165
Contact: Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 E Ninth Ave, Denver, Colo 80220

Pediatrics
Title: Psychological Assessment of Children
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Aug 3, 1974
Fee: $40
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Designed for: Pediatricians
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Research
Title: Current Trends in Clinical Research Technique
Sponsors: UT Health Science Center at Houston; UT System Cancer Center MD Anderson Hospital and Tumor Institute, Houston
Location: M D Anderson Hospital and Tumor Institute, Houston
Date: Aug 9-10, 1974
Contact: Office of the Director, UT Health Science Center at Houston, Division of Continuing Education, PO Box 20367, Houston 77025

SEPTEMBER

Gynecology
Title: The Great Debates in Gynecological Endocrinology and Infertility
Sponsors: Dept of Obstetrics and Gynecology, Baylor College of Medicine, Houston
Location: Baylor College of Medicine, Houston
Date: Sept 20-21, 1974
Guest Speakers: Dr. Robert W Kistner, Dr. Nichols Vorys, Dr. Michael E Yannone, Dr. Joseph W Goldzieher, Dr. Richard P Dickey, Dr. Rudi Ansbacher, and Dr. George T Schneider
Fee: $50
Contact: Dr. Veasy C Buttram, Jr, Dept of Obstetrics and Gynecology, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Obstetrics and Gynecology
Title: Prostaglandins
Sponsors: UT Health Science Center at Houston; Baylor College of Medicine, Houston
Location:
Date: Sept 19, 1974
Contact: Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

Psychiatry
Title: Helen Scott Saulsbury Lecture in Psychiatry—"Children and Child Rearing in America Today"
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Sept 27, 1974
Guest Speaker: Dr. Benjamin Spock
Credit: Category I, AMA Physician's Recognition Award

Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

Surgery
Title: G V Brindley Lecture in Surgery
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Sept 3, 1974
Guest Speaker: Dr. William C Cantey, University of South Carolina
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

OCTOBER

Infectious Diseases
Title: From the Trench to the Bench—Clinical and Laboratory Aspects of Anaerobic Infections
Sponsor: UT Health Science Center at Houston, Baylor College of Medicine, UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston Association of Medical Microbiologists
Location: Houston
Date: Oct 17, 1974
Fee: $6
Contact: Office of the Director, UT Health Science Center at Houston, Division of Continuing Education, Box 20367, Houston 77025

Internal Medicine
Title: Medical Intensive Care Course #2
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Oct 10-Dec 13, 1974 (Each Thursday)
Fee: $150
Credit: 90 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Medicine and Surgery
Title: Annual Conference in Medicine and Surgery—"The Thyroid"
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Oct 19, 1974
Guest Speaker: Dr. George Crile, Cleveland, Ohio
Fee: $35
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

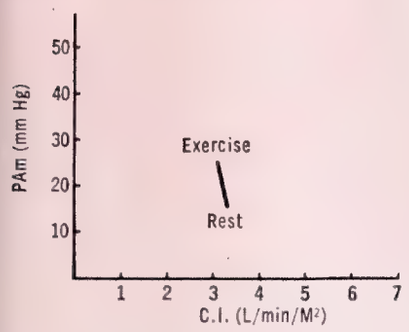
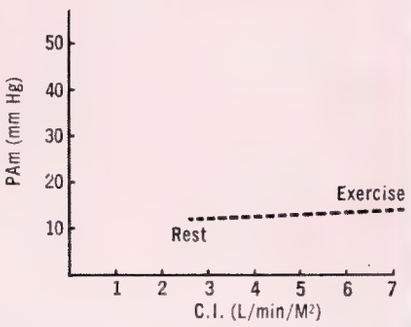
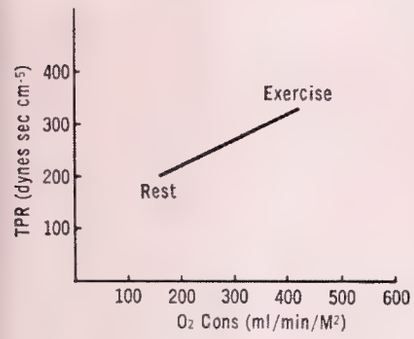
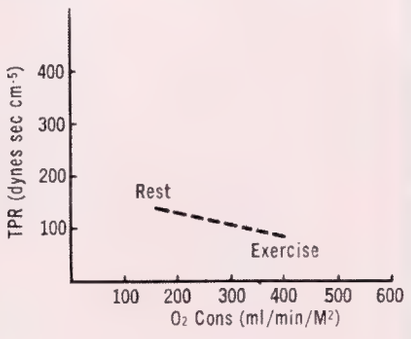
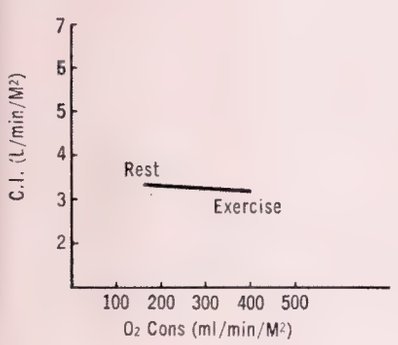
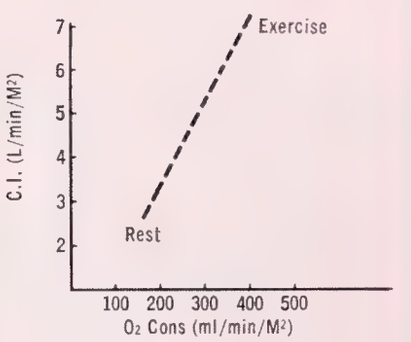
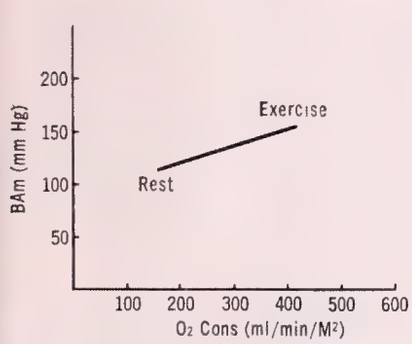
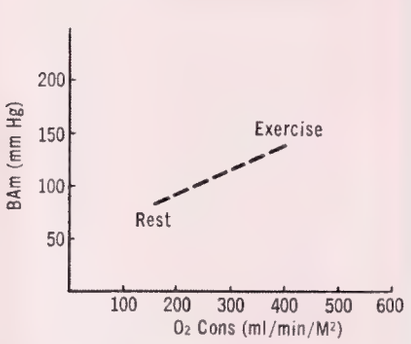
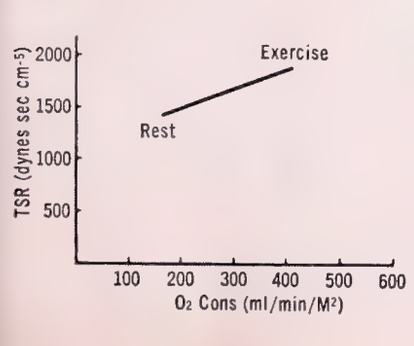
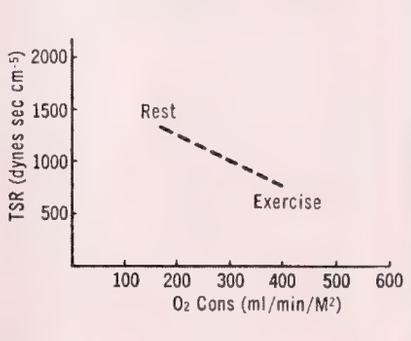
Obstetrics and Gynecology
Title: Recent Advances in Obstetrics and Gynecology
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Oct 25-26, 1974
Fee: $35
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

Ophthalmology and Otolaryngology
Title: Ophthalmology and Otolaryngology for Primary Care Physicians
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Oct 18-19, 1974
Fee: $85
Credit: 12 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Psychiatry
Title: Folk Medicine in Mexico and Southwestern United States
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Oct 3, 1974
Fee: $15
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

HEMODYNAMICS OF ANGINA PECTORIS* — PATIENTS RESTING AND EXERCISING, BEFORE AND AFTER ISORDIL SUBLINGUAL

(isosorbide dinitrate)

BEFORE MEDICATION		AFTER 5 mg. ISORDIL SUBLINGUAL (isosorbide dinitrate)
	PULMONARY ARTERY (MEAN PRESSURE)	
	TOTAL PULMONARY RESISTANCE	
	CARDIAC INDEX	
	BRACHIAL ARTERY (MEAN PRESSURE)	
	TOTAL SYSTEMIC RESISTANCE	

IN ANGINA PECTORIS*

- to abort or terminate acute anginal attacks
- to reduce the frequency and severity of anginal episodes often caused by unavoidable everyday stress

ISORDIL® SUBLINGUAL

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SUBLINGUAL TABLETS: 2.5 mg. and 5 mg.

***Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:
"Probably" effective: When taken by the sublingual route, Isordil Sublingual is indicated for the treatment of acute anginal attacks and for prophylaxis in situations likely to provoke such attacks.
Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.

Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

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Adapted from: Kasparian H, Najmi M, Likoff W: Laboratory Evaluation of Coronary Artery Disease. Scientific Exhibit, AMA Convention, Chicago, Ill, June 1966.

Information for authors

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each paper is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material.

Manuscripts should be typed double-spaced with ample margins on firm paper. Carbons are unacceptable, but the author should keep a copy.

The *title* should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

The *author's names* and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

The *text* should be narrative with complete sentences, *few abbreviations,* and logical subheading. For *spelling and usage* the editors follow "Dorland's Illustrated Medical Dictionary," 24th edition, and "Webster's Third New International Dictionary, Unabridged." *Quotations* must give credit to both author and source. A concise *introductory summary* is required.

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, top, author's name, and title of article in brief. *Legends* should be in complete sentences, numbered, and typed on a separate sheet. *Color illustrations* are authorized if they are of special value.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Permission should be obtained from the publishers and the authors for any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited in the bibliography. Copies of permission letters should be submitted with the manuscript.

All material is subject to *editing,* but authors receive typescripts to check before publication. Prompt return of typescripts to *Texas Medicine* office avoids delay in publication. After the article is sent to the printer, only minimal revision may be made.

Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Editorials should be prepared in the same general manner, and should be written in clear, concise language. They should be 300-500 words in length (about two to three pages typed with double spacing.)

Contributions to the news section should be sent to the Editorial Offices, 1801 N. Lamar Blvd., Austin 78701, by the 5th of the month preceding the month of publication.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Contributions, previously unpublished, are welcomed for review. News and other items should be sent to the Editorial Offices by the 5th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Scientific Articles are reviewed by technical and specialist consultants and are selected for publication in Texas Medicine by the Scientific Publication Committee, which is appointed by the Board of Publication. Editorials and other articles are subject to review by officers of the Texas Medical Association, appropriate expert and technical consultants, and representatives of county medical societies when in their purview.

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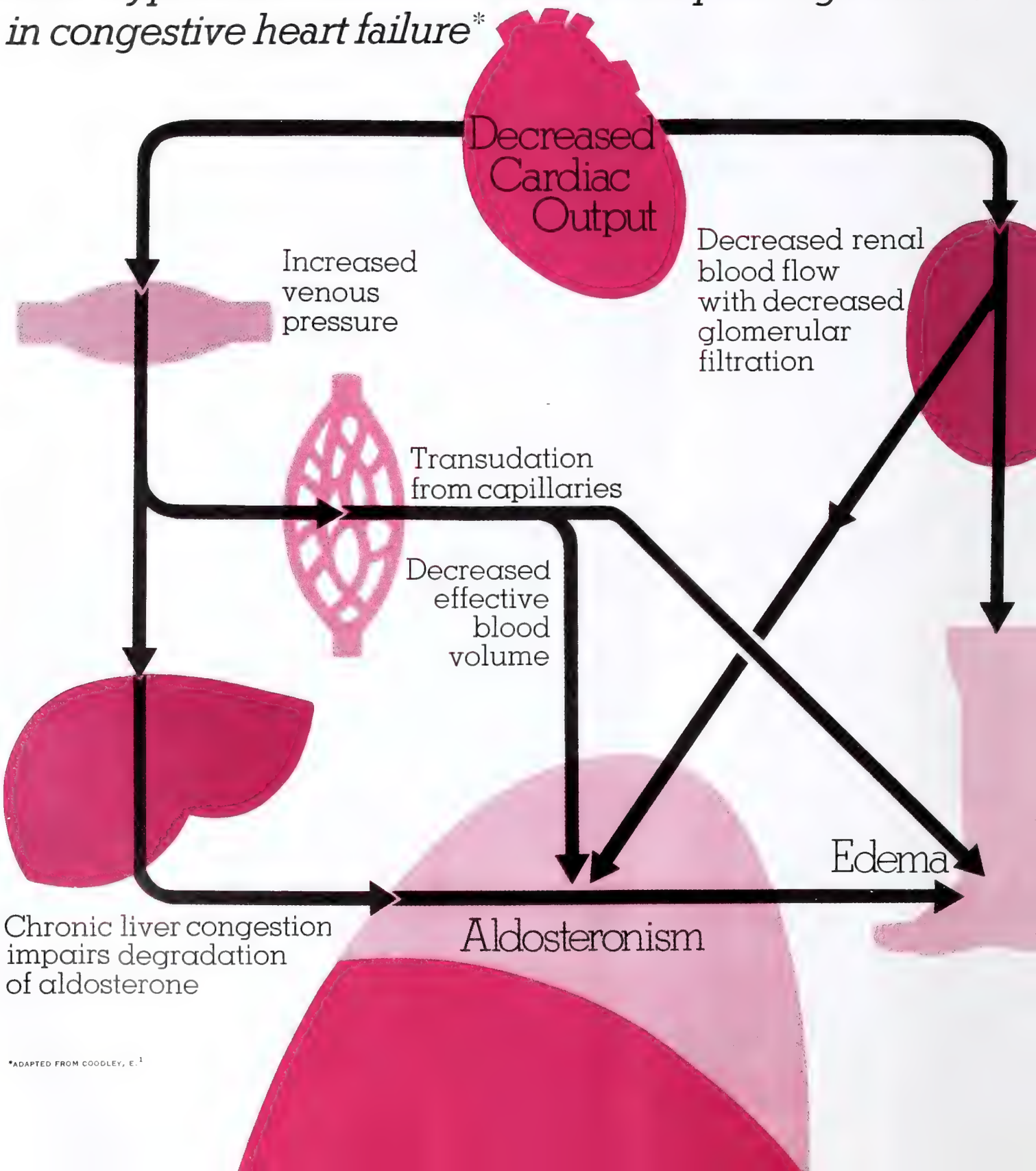
In congestive heart failure...
secondary aldosteronism

*How hyperaldosteronism leads to and prolongs edema in congestive heart failure**



*ADAPTED FROM COODLEY, E.[1]

is a primary factor

To "switch off" the aldosterone factor in congestive heart failure

Aldactone
spironolactone 25-mg. tablets

the only specific aldosterone antagonist... basic in all diuretic therapy

Three ways to use Aldactone in congestive heart failure

1. As the only diuretic
- Often sufficient alone.
- Produces gradual, sustained diuresis by blocking aldosterone action in the distal renal tubule.
- Avoids potassium loss.

2. As the basic daily diuretic with an "add-on" alternate-day-diuretic ("A.D.D." schedule)
- Can be administered daily as basic therapy with the additional agent (furosemide or ethacrynic acid) given every second or third day.
- Aldactone plus "A.D.D." schedule minimizes potassium deficiency and potentiates effect of "add-on" diuretic.[2]
- Avoids acute volume depletion and aldosterone rebound.[2]

3. As a daily diuretic in combination with a daily dose of a thiazide
- Permits daily additive diuretic effect while maintaining potassium balance.

Indications—Essential hypertension; edema or ascites of congestive heart failure, cirrhosis of the liver and the nephrotic syndrome; idiopathic edema. Some patients with malignant effusions may benefit from Aldactone (spironolactone), particularly when given with a thiazide diuretic.

Contraindications—Acute renal insufficiency, rapidly progressing impairment of renal function, anuria and hyperkalemia.

Warnings—Potassium supplementation may cause hyperkalemia and is not indicated unless a glucocorticoid is also given. Discontinue potassium supplementation if hyperkalemia develops. **Usage of any drug in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the mother and fetus.**

Precautions—Patients should be checked carefully since electrolyte imbalance may occur. Although usually insignificant, hyperkalemia may be serious when renal impairment exists; deaths have occurred. Hyponatremia, manifested by dryness of the mouth, thirst, lethargy and drowsiness, together with a low serum sodium may be caused or aggravated, especially when Aldactone is combined with other diuretics. Elevation of BUN may occur, especially when pretreatment hyperazotemia exists. Mild acidosis may occur. Reduce the dosage of other antihypertensive drugs, particularly the ganglionic blocking agents, by at least 50 percent when adding Aldactone since it may potentiate their action.

Adverse Reactions—Drowsiness, lethargy, headache, diarrhea and other gastrointestinal symptoms, maculopapular or erythematous cutaneous eruptions, urticaria, mental confusion, drug fever, ataxia, gynecomastia, inability to achieve or maintain erection, mild androgenic effects, including hirsutism, irregular menses and deepening voice. Adverse reactions are infrequent and usually reversible.

Dosage and Administration—For **essential hypertension** in **adults** the daily dosage is 50 to 100 mg. in divided doses. Aldactone may be combined with a thiazide diuretic if necessary. Continue treatment for two weeks or longer since an adequate response may not occur sooner. Adjust subsequent dosage according to response of patient

For edema, ascites or **effusions** in **adults** initial daily dosage is 100 mg. in divided doses. Continue medication for at least five days to determine diuretic response; add a thiazide or organic mercurial if adequate diuretic response has not occurred. Aldactone dosage should not be changed when other therapy is added. A daily dosage of Aldactone considerably greater than 75 mg. may be given if necessary.

A glucocorticoid, such as 15 to 20 mg. of prednisone daily, may be desirable for patients with extremely resistant edema which does not respond adequately to Aldactone and a conventional diuretic. Observe the usual precautions applicable to glucocorticoid therapy; supplemental potassium will usually be necessary. Such patients frequently have an associated hyponatremia—restriction of fluid intake to 1 liter per day or administration of mannitol or urea may be necessary (these measures are contraindicated in patients with uremia or severely impaired renal function). Mannitol is contraindicated in patients with congestive heart failure, and urea is contraindicated with a history or signs of hepatic coma unless the patient is receiving antibiotics orally to "sterilize" the gastrointestinal tract

Glucocorticoids should probably be given first to patients with nephrosis since Aldactone, although useful for diuresis, will not directly affect the basic pathologic process.

For **children** the daily dosage should provide 1.5 mg. of Aldactone per pound of body weight.

References: 1. Coodley, E.: Consultant 12:106-107, 109, 111, 113, 115 (July) 1972. **2.** Thorn, G. W., and Lauler, D. P.: Am. J. Med. 53 673-684 (Nov.) 1972.

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New York is a vertigo festival.

Antivert®/25
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for vertigo*

Antivert® (meclizine HCl) has been found useful in the management of vertigo associated with diseases affecting the vestibular system. It is available as Antivert/25 (25 mg. meclizine HCl) and Antivert (12.5 mg. meclizine HCl) scored tablets for convenience and flexibility of dosage. Antivert/25 (25 mg. meclizine HCl) Chewable Tablets are available for the management of nausea, vomiting, and dizziness associated with motion sickness.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

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COMING MEETINGS

TEXAS PEDIATRIC SOCIETY

The 52nd annual meeting of the Texas Pediatric Society will combine with business meetings of the Texas Chapter of the American Academy of Pediatrics and the Texas Society of Pediatric Surgeons Sept 19-21 at the Rodeway Inn in El Paso. Scientific program topics include apnea at birth, regionalization of perinatal health care, long and short term effects of maternal-infant separation, congenital postural deformities, advances in infant nutrition and others. The meeting will be followed by a post-meeting seminar tour to Mazatlan with Dr. Sydney Gellis as a daily lecturer while in Mexico.

Contact: Dr. Laurance N. Nickey, Vice President, Texas Pediatric Society, 1515 N Oregon St, El Paso 79902.

NUECES COUNTY MEDICAL SOCIETY CHILD ABUSE INSTITUTE

Multi-disciplinary planning is underway for this Institute scheduled for Sept 12-13 at Del Mar College Auditorium in Corpus Christi. Registration is to be limited to 1,800 participants. The fee is $6. Speakers will include Dr. Eli H Newberger, Boston Children's Hospital Medical Center; Dr. Brandt Steele, University of Colorado Medical Center, Denver; Dr. John B Reinhart, Children's Hospital, Pittsburgh, Pa; Judge James Delaney, Brighton, Colo; Leontine Young, PhD, executive director, Child Services Association of America, Newark, NJ; and Prof Chris Flammang, University of Illinois, Champaign, Ill. The institute has been approved for 13 elective credits by the American Academy of Family Physicians. Pre-registration will be conducted during the month of August.

ROCKY MOUNTAIN RADIOLOGICAL SOCIETY

The 36th Midsummer Radiological Conference of the Rocky Mountain Radiological Society will be held Aug 22-24 at the Brown Palace Hotel, Denver. A refresher course on chest diseases will be sponsored by the Radiological Society of North America, and other topics on the program include isotopes in cardiology; the abdomen: an anatomic approach; approach to arthritis; pitfalls in bone scanning; skeletal manifestations of the lymphomas and leukemias; and diagnostic criteria in abdominal echography. Registration fee for nonmembers if $50.

Contact: Dr. Lorenz R Wurtzebach, Rocky Mountain Radiological Society, 4200 E Ninth Avenue, Denver 80220, Sec-Treas.

CURRENT NATIONAL MEETINGS

AMERICAN HEALTH CONGRESS will meet Aug 12-15 at McCormick Place in Chicago. Under the theme "Aim at the Issues," programming will be structured so that major issues involving the delivery of health care will be discussed each morning of the four-day meeting. Each of the four sessions will feature speakers of national prominence. Instructional sessions will be conducted after each morning session and continue throughout the day. Topics cover patient care, governmental regulation, financial management, administration and manpower and others. Registration is free and open to everyone working in or otherwise relating to the field of health care. Contact: American Health Congress, 840 N Lake Shore Drive, Chicago 60611.

AMERICAN MEDICAL ASSOCIATION's Fourth Hemisphere Nutrition Conference will be held Aug 19-22 in Bal Harbour, Fla. The economics of food production in a world forced to establish priorities for limited supplies of energy will be a major theme of the conference. It will also feature continuing education sessions for nutritionists to provide an update of information for those who deal with malnutrition as it relates to disease. Contact: Department of Foods and Nutrition, American Medical Association, 535 N Dearborn St, Chicago 60610.

ASPEN MUSHROOM CONFERENCE, sponsored by the Beth Israel Hospital, Denver, and the Colorado Mountain College, Glenwood Springs, Colo, is designed for physicians, scientists, and amateur mycologists interested in the identification and toxic properties of mushrooms. It will be held at the Inns of Court, Snowmass-at-Aspen, Colo, Aug 26-30. Didactic sessions and refresher courses on mushroom identification will be held in the early mornings and late afternoons at the novice and advanced student levels. Group discussions on advances in the diagnosis and treatment of mushroom poisoning will be offered to physicians and others interested in the subject. Experienced leaders will conduct daily forays into the surrounding mountains to collect edible and poisonous species and study their field characteristics. Contact: Aspen Mushroom Conference, Beth Israel Hospital, W 17th Ave & Lowell Blvd, Denver 80204.

For other courses and symposiums, see Continuing Education Courses, pp 25-26.

Calendar of Listings

■ Denotes Texas Meetings

AUGUST

■ AMERICAN CANCER SOCIETY, TEXAS DIVISION, Board of Directors, Dallas, Aug 7-8, 1974. Curt W Reimann, PO Box 9863, Austin 78766, Exec VP.

AMERICAN HOSPITAL ASSOCIATION, Chicago, Aug 12-15, 1974. John Alexander McMahon, 840 N Lake Shore Dr, Chicago 60611, Pres.

NATIONAL MEDICAL AND DENTAL ASSOCIATION OF AMERICA, St Augustine, Fla, Aug 4-8, 1974. Dr. Henry Polchlopek, 434 Springfield St, Chicopee, Maine 01013, Sec.

ROCKY MOUNTAIN RADIOLOGICAL SOCIETY, Denver, Aug 22-24, 1974. Dr. Lorenz R Wurtzebach, 4200 E Ninth Ave, Denver 80220, Sec-Treas.

SEPTEMBER

■ AMERICAN ACADEMY OF PEDIATRICS, TEXAS CHAPTER, El Paso, Sept 20, 1974. Dr. Paul Meyer, 3121 Procter, Port Arthur, Tex 77640, Sec.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, Denver, Sept 23-29, 1974. Dene R Murray, One E Wacker Dr, Suite 1510, Chicago 60601, Exec Dir.

AMERICAN ASSOCIATION OF MEDICAL CLINICS, Washington, DC, Sept 4-8, 1974. James B Cobb, PO Box 949, Alexandria, Va 22313, Exec Off.

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■ BLACKFORD MEMORIAL LECTURES, Denison, Sept 7, 1974. Dr. John D Gleckler, 211 N Fannin, Denison 76020, Chrmn.

FLYING PHYSICIANS ASSOCIATION, Biloxi, Miss, Sept 22-27, 1974. Albert Carriere, 801 Green Bay Rd, Lake Bluff, Ill 60044, Business Counsel.

OKLAHOMA REGIONAL MEETING, AMERICAN COLLEGE OF PHYSICIANS, Monkey Island, Grove, Okla, Sept 26-28, 1974. Dr. Robert M Bird, 800 NE 13th St, Oklahoma City, Okla 73104.

■ TEXAS MEDICAL ASSOCIATION, Austin, Sept 20-22, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

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AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, Cincinnati, Oct 15-20, 1974. J J Garvey, 2317 W Jefferson St, Suite 208, Joliet, Ill 60435, Exec Sec.

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INTERNATIONAL CANCER CONGRESS, Florence, Italy, Oct 20-26, 1974. Dr. Murray M Copeland, M D Anderson Hospital and Tumor Institute, Houston 77025.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct 12, 1974. Carlie Umphres, PO Box 3276, Amarillo 79106, Exec Sec.

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INTERNATIONAL COLLEGE OF SURGEONS, Portland, Ore, Nov, 1974. Dr. Virgil T DeVault, 1516 Lake Shore Dr, Chicago 60601, Exec Off.

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DECEMBER

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■ TEXAS ACADEMY OF INTERNAL MEDICINE, Galveston, Dec 5, 1974. Dr. Tom W Duke, PO Box 3460, Amarillo 79106, Sec.

■ TEXAS SOCIETY OF INTERNAL MEDICINE, Galveston, Dec, 1974. Dr. Willis A Seyffert, Jr, 6006 N Mesa, #100, El Paso 79912, Sec-treas.

JANUARY

■ TEXAS MEDICAL ASSOCIATION, Austin, Jan 17-19, 1975. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Dir.

■ TEXAS SOCIETY OF PATHOLOGISTS, El Paso, Jan 24-26, 1975. Dr. John A Webb, 704 Medical Towers, Houston 77025, Sec.

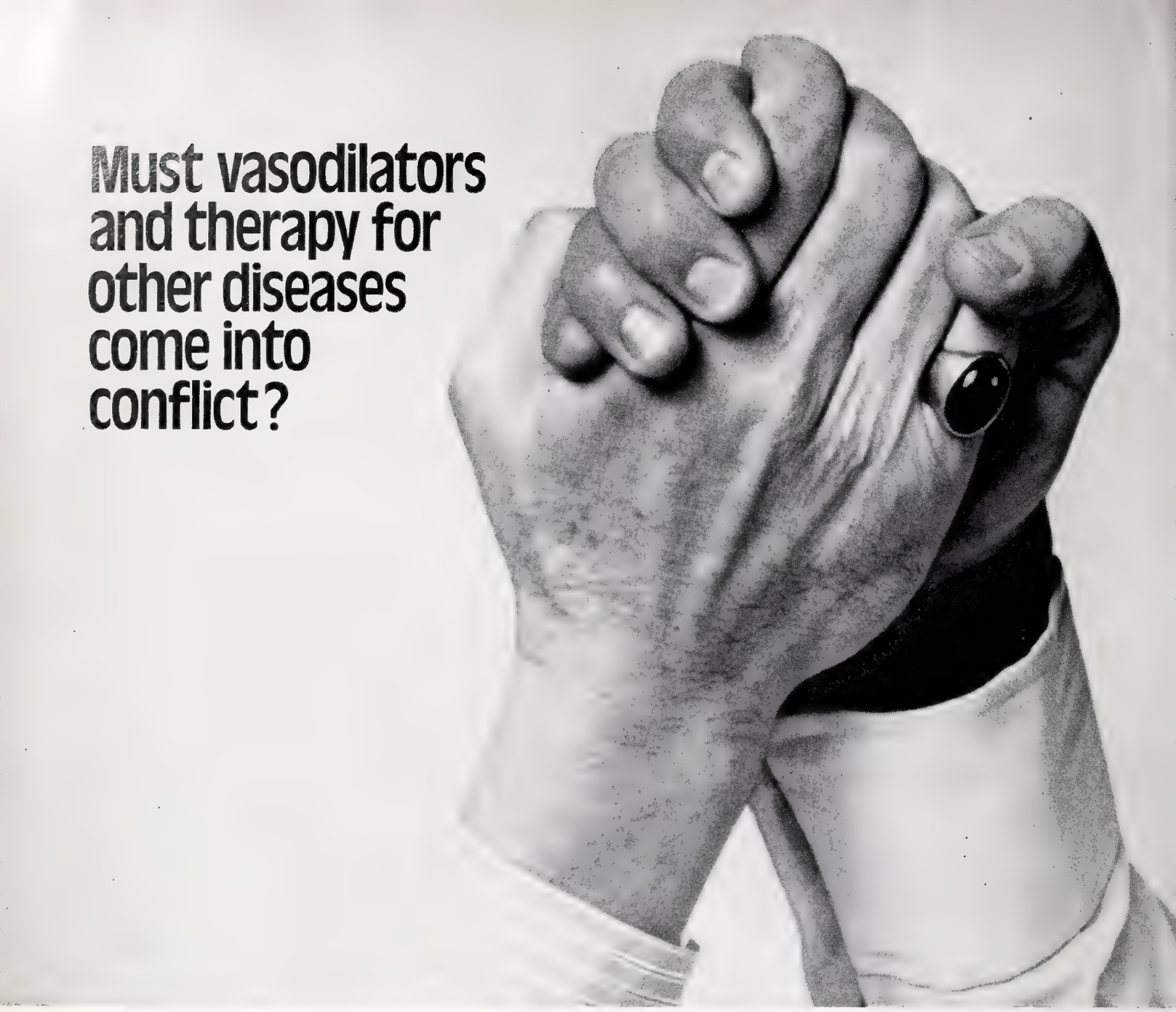
FEBRUARY

AMERICAN ACADEMY OF ALLERGY, San Diego, Feb 15-19, 1975. James O Kelley, 225 E Michigan St, Milwaukee 53202, Exec Off.

AMERICAN ACADEMY OF FORENSIC SCIENCES, Chicago, David A Crown, Room 3517, State Dept, Washington, DC 20520, Pres.

■ AMERICAN COLLEGE OF CARDIOLOGY, Houston, Feb 10-13, 1975. William D Nelligan, 9650 Rockville Pike, Bethesda 20014, Exec Off.

Must vasodilators and therapy for other diseases come into conflict?



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In fact, there are no known contraindications to the use of Vasodilan in recommended oral doses, other than that it should not be given in the presence of frank arterial bleeding or immediately postpartum.

1. Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

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Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500 and Unit Dose.

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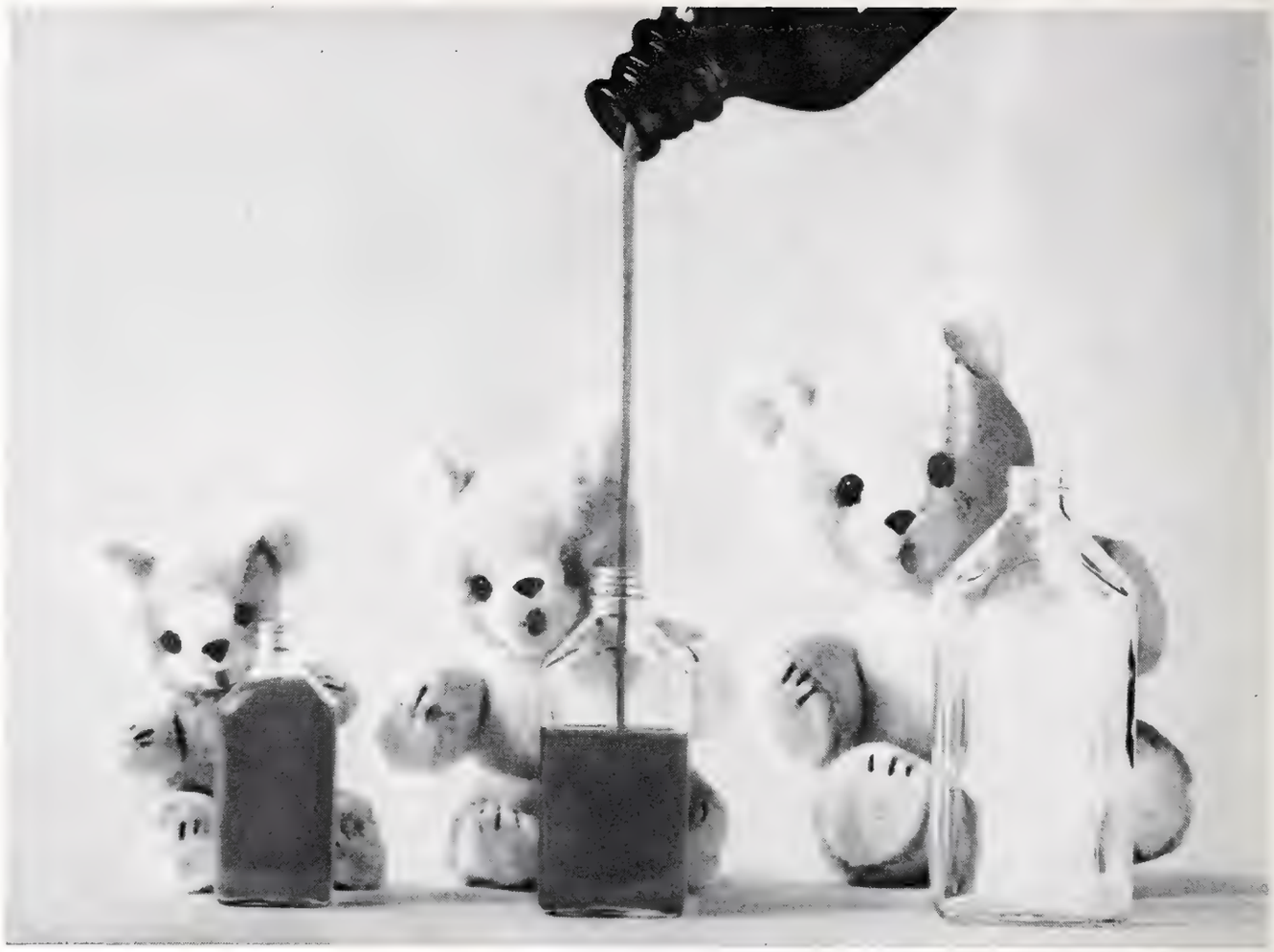

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Percutaneous renal biopsy

Lt Col Robert E. Lordon, USAF, MC; Col Alfred L. Thompson, Jr., USAF MC

Renal biopsy has become an important clinical tool in the evaluation of a patient with renal disease. Valuable information can be obtained regarding diagnosis, prognosis, and therapy. The renal biopsy is examined by routine light microscopy, however the use of electron microscopy and immunofluorescent microscopy has enlarged the biopsy material's usefulness.

The general use of the renal biopsy procedure is a recent event. Before 1943 there were only a small number of reports of histological studies of the kidney during the life of a patient based on an open surgical biopsy. Iverson and Brun published their method and results of percutaneous needle biopsy of the kidney in 1951, and stimulated the widespread adoption of their method.[1] The kidney has many unique features that make percutaneous biopsy feasible and relatively safe. The kidney is a paired organ, is located retroperitoneally, and is enclosed in a tight fascial compartment. It lies almost subcutaneously behind a thin-roofed anatomical triangle. These anatomic features permit a high yield of adequate specimens for study.

The percutaneous kidney biopsy is done under local anesthesia in an alert, cooperative patient with a special needle of which several types are available. The most commonly used needle is a Franklin modification of the Vim-Silverman biopsy needle. The procedure depends upon intravenous pyelography or isotopic scan localization, palpation, then the use of a fine-gauge needle for final localization of the kidney at the time of biopsy. Many centers are now doing the procedure under direct fluoroscopic control. This approach is particularly useful for biopsy in children. The cores of tissue obtained are used not only for examination by light microscopy, but also for electron and immunofluorescent microscopy. For most lesions, at least five glomeruli must be present on the sections of tissue to be adequate for diagnostic purposes. A survey by Welt, of the experience of 21 leading nephrology centers before direct fluoroscopy was widely used, indicated that adequate tissue was obtained in 90% of the biopsy attempts.[2]

Certain absolute and relative contraindications for kidney biopsy do exist. The following list of absolute contraindications is universally accepted:

1. Untrained operator
2. Single kidney
3. Bleeding and coagulation disorders
4. Severe anemia (less than 8 gm/100 ml of hemoglobin)
5. Uncooperative patient
6. Malignancy, abscess, or hydronephrosis
7. Vascular abnormality, including renal arteriovenous fistula
8. Marked congenital abnormality of position
9. Terminal illness

An increased incidence of complications occurs in patients with uremia or hypertension with a blood pressure greater than 160/110 mm Hg, however these remain only relative contraindications to renal biopsy.

The rate of complications from renal biopsy is in inverse proportion to the experience of the person performing the procedure. No matter what methods are used for localizing the kidney, all are blind procedures so far as blood vessels and postbiopsy bleeding are concerned. Bleeding is the major hazard and complication, and can be present as gross hematuria or perirenal bleeding. It can require transfusions or, rarely, nephrectomy. Kark re-

ported in 1958 on the incidence of complications in 500 percutaneous renal biopsies.[3] Gross hematuria was noted in 5.2%, and perirenal hematoma in 0.6%. Transfusions were required in 0.4%, and no patients required nephrectomy. Brun reported a 7.9% incidence of gross hematuria in more than 500 biopsies.[4] Welt reported data based on surveys of 21 leading nephrology centers which had performed more than 8,000 renal biopsies.[2] There were six fatalities, an incidence of 0.07%. This mortality rate is less than the 0.3% reported from liver biopsy. Five patients developed postbiopsy arteriovenous fistulas and five required nephrectomies. Hematuria and hematomas were more severe and more common in patients were uremia, severe hypertension, or diffuse connective tissue disorders. Renal biopsy is a procedure that should be performed only by those with experience, however much useful information can be gained from this important clinical tool.

Histological studies are routinely done on thin 2-3μ sections with usual staining methods. Special stains, including those for amyloid, collagen, and fibrin may be useful in selected cases. Electron microscopy has become useful in better defining glomerular basement membranes and electron-dense deposits thought to represent antigen-antibody complexes. In recent years, immunofluorescent microscopy has become an important technique in studying the degree and location of various classes of immunoglobulins and their participation in glomerular disease. Also, the participation of complement and fibrinogen can be demonstrated by this method. Immunofluorescent microscopy also can define the type of immune-mediated injury taking place in the kidney. An example of this would be antiglomerular basement membrane glomerulonephritis, in which an antibody is present and directed against the glomerular basement membrane, such as in Goodpasture's syndrome. Another example would be antigen-antibody complex glomerulonephritis, in which circulating antigen-antibody complexes are deposited in or about the glomerular basement membrane, such as in post-streptococcal glomerulonephritis. Much more is to be learned using the valuable tool of immunofluorescent microscopy in the study of renal biopsy tissue.

A common example of the importance of renal pathology in establishing a diagnosis and the prognosis is the asymptomatic patient with hematuria and normal renal function. Renal parenchymal disease can be assumed to be present in such patients if red cell casts are seen on urinary sediment examination, and should be highly suspected if significant proteinuria accompanies the hematuria and a urological evaluation shows no abnormalities. In many instances a relatively accurate prognosis can be determined by renal pathology. This is particularly important in patients concerned with career planning, job qualification, or insurance eligibility. In children it can also have an effect on behavioral development, physician activity, and parental concern.

There now have been described several familial forms of benign hematuria which can be distinguished, by renal pathology, from the more widely known hereditary nephritis as described by Alport.[5-7] In one type of familial disease, normal histological development is seen on light microscopy, and electron microscopy reveals thin glomerular basement membranes implying a structural cause for hematuria in these cases. Another benign lesion that presents as familial hematuria is a mild, focal, proliferative, glomerular lesion which does not progress during long-term follow-up. These forms of familial hematuria are easily distinguishable from Al-

port's disease, which is primarily a disease of the interstitium or shows diffuse proliferative changes in the glomeruli and carries a poor prognosis, particularly in males.

Also, there have been reported several series in children and adults of idiopathic recurrent gross hematuria with red cell casts, usually accompanying or immediately following an upper respiratory tract illness.[8] In spite of this clinical presentation, which is particularly frightening in children, pathologic renal findings show mild proliferative changes in some segments of only some of the glomeruli. In almost all cases, some of which have been followed as long as 15 years, these changes are not progressive. In this entity, which often is called benign focal hematuria, immunofluorescent staining frequently shows no immunoglobulins.

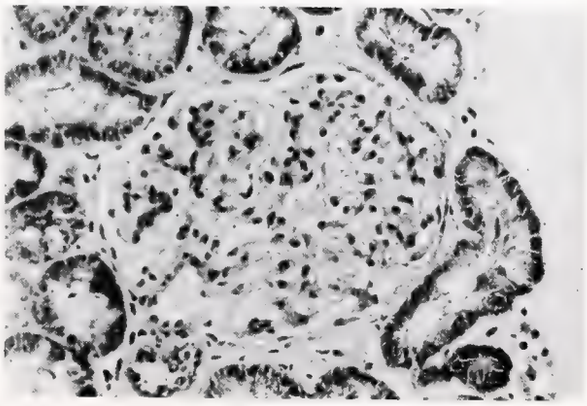
Many cases of chronic glomerulonephritis will present as asymptomatic hematuria and/or proteinuria. Renal biopsy again can be of great assistance in determining prognosis by the amount and type of pathologic changes noted. This is further enhanced when serial biopsies are available. An example would be a biopsy showing scattered areas of sclerosis or scarring of some glomeruli with minimal changes of active inflammation or cellular reaction. If after a year or more of follow-up there has been no progression either clinically or on renal biopsy, one can predict a favorable prognosis and perhaps inactive disease.

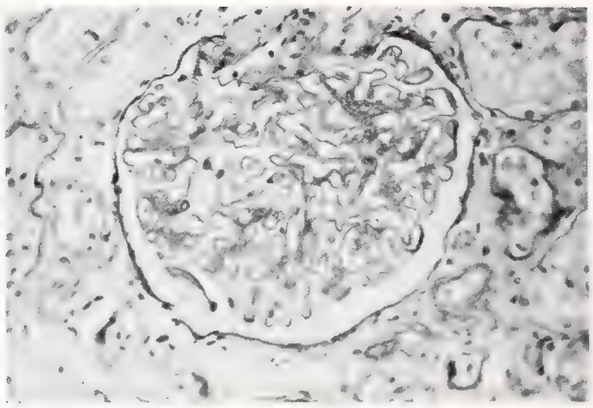
Renal biopsy is almost always indicated in patients with decreased renal function or renal insufficiency. Again the amount of scarring, proliferation, and inflammatory changes have prognostic importance. Interstitial nephritis is a more slowly progressive type of renal disease than most glomerular disease.

In glomerulonephritis with renal insufficiency, immunopathology has therapeutic as well as diagnostic importance. The finding of immunoglobulin deposition characteristic of antiglomerular basement membrane antibody, described as linear fluorescence, indicates a pathogenic process much more likely to recur in a transplanted kidney.[9] This is particularly threatening when the clinical course is rapidly progressive, and it is confirmed on renal biopsy by finding cellular crescents in the glomeruli. Many physicians feel that these patients should undergo bilateral nephrectomy and be maintained on hemodialysis for at least six months prior to renal transplantation. This is especially crucial when a living donor is to be used.

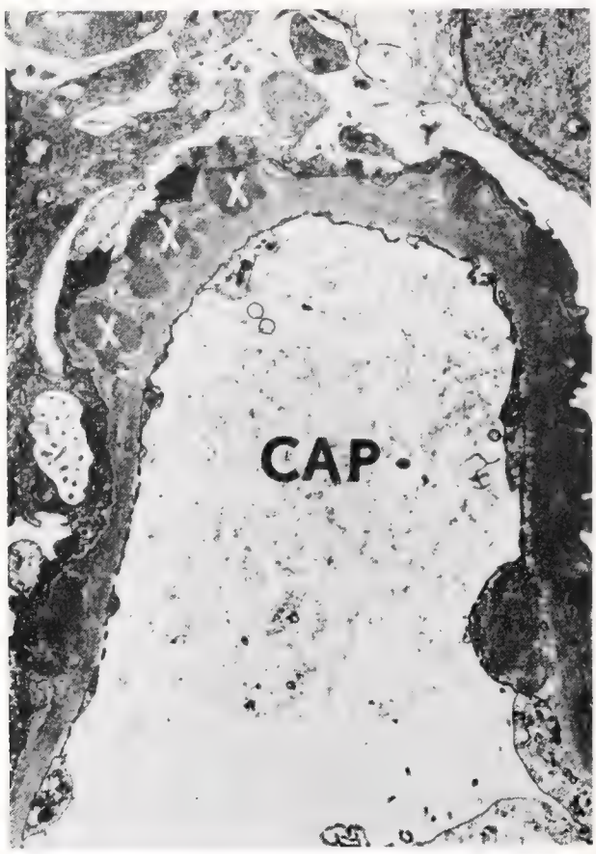
Other instances in which renal pathology has a direct bearing on therapy are in the nephrotic syndrome and the nephritis of systemic lupus erythematosus. Nephrotic syndrome occurs with numerous systemic diseases and various types of primary renal disease. The findings in renal pathology range from normal histological appearance on light microscopy or only mild mesangial cell proliferation (called nil disease or minimal lesion nephritis) to a pure membranous change or a severe diffuse proliferative lesion. The

1. Glomerulus from a patient with focal proliferative lupus nephritis. There are irregular areas of intracapillary cell proliferation accompanied by increased basement membrane-like material between cells. Other glomeruli in the biopsy appear normal. Giemsa-trichrome stain, X 211.





2a. Glomerulus from a patient with membranous lupus nephritis. Capillary walls are uniformly thickened without significant hypercellularity. PAS stain, X 196.



2b. Electron photomicrograph of a glomerular capillary loop from a patient with membranous lupus nephritis. Dense deposits (X) are distributed along the basement membrane beneath the epithelial cells. Projections of basement membrane appear as "spikes" (↓) between the deposits (CAP = capillary lumen). X 4,640.

former lesion usually produces negative results on immunofluorescent studies and has a high incidence of responsiveness to steroid therapy. This disease carries a 90% chance of remission, particularly in children. In certain cases of minimal lesion nephritis, the nephrotic syndrome repeatedly recurs or develops steroid dependence in that continued steroid therapy is necessary to maintain remission. In these latter instances, a short course of therapy with Cytoxan at relatively low doses (2 mg/kg body weight) has been found to induce a remission without corticosteroid maintenance in a high percentage of patients.[10] Since sterility is a frequent complication of Cytoxan therapy, particularly in males, its use should be restricted to those cases in which a minimal lesion has been confirmed by renal biopsy.

Steroid therapy has shown a much more variable effect in nephrotic syndrome associated with membranous or proliferative glomerulonephritis. Although some feel that a trial of corticosteroid therapy is still justified in these cases, it should not be pursued to a point of advanced complications of steroid therapy and unnecessary risk to the patient. Knowledge of the underlying pathology is important in assisting the clinician in this decision.

The nephritis associated with systemic lupus erythematosus has three different types of pathology. The prognosis varies widely, depending on the renal lesion.[11] Patients with a focal proliferative lesion (Fig 1), characterized by involvement of only some of the glomeruli, have a good prognosis; they seldom develop renal failure and their therapy is determined by manifestations of their disease other than their nephritis. In general, they should not be treated with steroids specifically because of their renal disease. Patients with membranous (Fig 2) or diffuse prolifera-

tive lupus nephritis (Fig 3) have a high incidence of renal failure developing within five years in spite of steroid-induced remissions. The use of other chemotherapy in addition to corticosteroids in these patients initially has appeared to be quite encouraging, with induced remission approaching 100%. The effect on the otherwise grim long-term prognosis, however, is as yet undetermined.

Renal biopsy has advanced from a research tool to a necessary adjunct for the clinician, and will continue to add to our understanding of renal disease. It should be available to all physicians who are concerned with the primary care of patients with renal disease.

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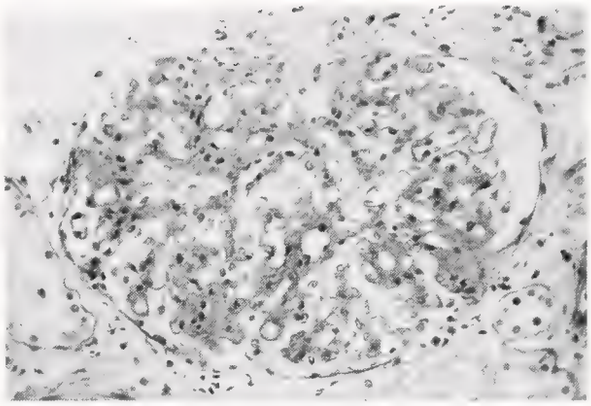
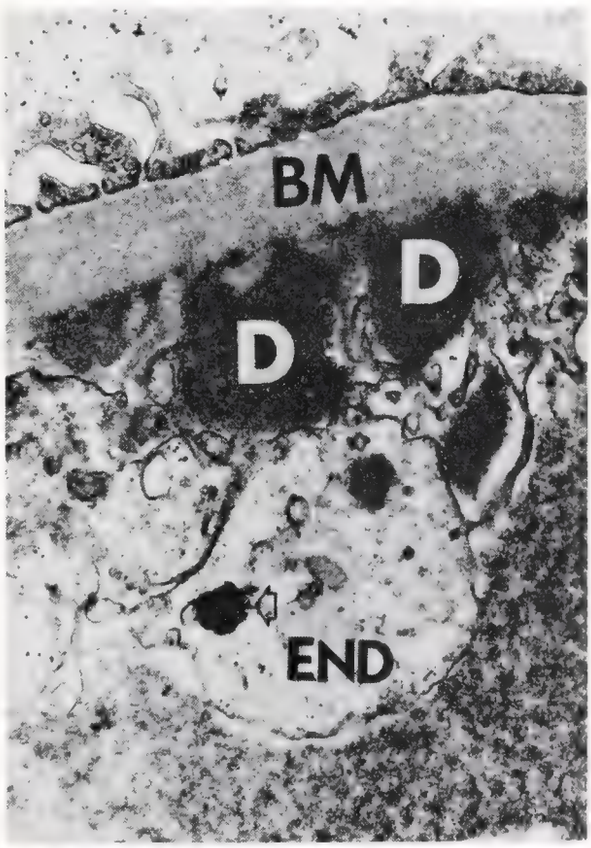


3a. Glomerulus from a patient with diffuse proliferative lupus nephritis. There is intracapillary cell proliferation with some nuclear necrosis, increased basement membrane-like material between proliferating cells, and obliteration of capillary lumens. PAS stain, X 186.



3b. Electron photomicrograph of a glomerular capillary loop from a patient with diffuse proliferative lupus nephritis. Electron dense deposits (D) are located on the subendothelial surface of the basement membrane (BM). Myxovirus-like particles (→) are seen in the endothelial cell (END). X 18,560.

Managing the severely ischemic lower extremity

Robert N. McGehee, MD; Richard T. Padula, MD

Femoropopliteal occlusive disease is the primary cause of gangrene of the legs. Approximately one-third of cases of significant femoropopliteal occlusive disease will progress to tissue necrosis. Signs and symptoms which should alert one to impending gangrene are: a sudden decrease in claudication distance, the development of rest pain, or nonhealing of small injuries of the extremity. Femoropopliteal bypass using reversed saphenous vein provides excellent immediate and long-term limb salvage rates. Newer techniques of femorotibial bypass may result in salvage of a large number of patients with occlusion of the popliteal artery below the knee. Since the alternative to revascularization is generally a major amputation, an aggressive approach is urged.

Patients who present with severely ischemic legs represent a common problem on the surgical service of any large hospital. The ischemic extremity may represent not only a threat of loss of limb, but loss of life as well. Older individuals, in particular, do not tolerate amputations well. Even with prostheses, the incidence of serious falls is increased. In addition, the increased exertion necessary to ambulate with a prosthesis may precipitate myocardial infarction. Those patients who do not learn to ambulate may be restricted to wheelchair or bed, with all the attendant risks of prolonged inactivity. The advantages of salvaging the ischemic extremity are obvious. This article describes current management of patients in our institution who present with severely ischemic legs.

Pathogenesis and Natural Course

Arteriosclerotic disease of the lower extremities may be divided into three categories: aorto-iliac occlusive disease, femoropopliteal occlusive disease, or combined aorto-iliac and femoropopliteal occlusive disease. Patients with pure aorto-iliac occlusive disease generally present with complaints referable to impotence and buttock claudication, and usually do not have signs of severe ischemia. Patients who have only femoral artery occlusion with good collateral blood supply to the popliteal and tibial arteries usually present with only calf claudication. Those patients who have occlusion of major collateral arteries in addition to femoral arterial obstruction comprise the group with severe ischemia of the leg. If the proximal occlusion involves the deep femoral artery orifice, or if that artery is severely stenotic, there is little else to serve as collateral blood supply. Additionally, if the popliteal artery or its branches become occluded, ischemia will develop and will be dependent on the exact location of the popliteal occlusion and its relation to geniculate collaterals.

In general, symptoms of ischemia begin rather suddenly and are superimposed on symptoms of preexisting arterial insufficiency. An ischemic extremity can become worse suddenly by: (1) thrombosis, (2) embolism, (3) development of multiple occlusions, and (4) external trauma.[8] Thrombosis may be superimposed on preexisting disease and may be caused by mechanical obstruction such as prolonged squatting, sitting on the edge of a seat, or crossing the knees. Less obvious etiologic factors may occur, however. Cardiac output decreases while sleeping, and many of these patients are awakened by symptoms of acute ischemia. Another entity causing sudden worsening may be a large embolus arising in the heart or aorta, but more commonly multiple small emboli from arteriosclerotic plaques occlude major collaterals or small

arteries of the extremity. Multiple occlusions occurring in the course of an artery may cause problems by forcing the ultimate blood supply through more collateral channels. External trauma to the ischemic extremity may cause worsening due to the increased metabolic demands needed for repair of the injury. The external trauma is often of a minor nature such as putting a hot water bottle on a leg, ill-advised trimming of a toenail, or minor scratches or scrapes.

Of patients with femoropopliteal occlusive disease, 25 to 35% may be expected to develop severely ischemic limbs during the course of their illness.[8] Management of these severely ischemic limbs may alter progression of the disease, but without treatment most will go on to require amputation.

Clinical Picture

During the course of progression of femoropopliteal occlusive disease certain symptoms become significant (Fig 1). Claudication is a pain, ache, or cramp in the calf due to muscle ischemia which occurs with exercise. This pain may be relieved simply by resting the extremity. A sudden decrease in the claudication distance is of great significance in a patient with known femoropopliteal occlusive disease. Numbness or paresthesias of the toes often are precursors of severe arterial insufficiency. Rest pain represents a severe worsening of ischemia. This pain generally occurs in the toes or feet, and is frequently more severe at night. The patient may attempt to obtain relief by dangling the extremity over the side of the bed or by sleeping in a chair. This leads to dependent edema and the classical picture of a patient with a painful, swollen "lobster" foot. Pregangrenous pain is classically described as a deep, steady, boring discomfort in the toes and distal portion of the foot. Ischemic neuropathy may occur as a result of ischemia of a major nerve trunk, in which case the pain pattern will be in the sensory distribution of that nerve trunk. Minor trauma may lead to a nonhealing ulcer of the foot, which is classically quite painful. The next stage in deterioration is the development of local areas of gangrene which, if not corrected, will lead to the final stage of irreversible gangrene. At this point, even if blood flow is restored to the extremity, the tissue loss is irreversible.

Diagnosis usually is quite simple and may be made by history and physical examination. Femoral pulses generally are present, but no distal pulses are palpable. The Smithwick test provides a good estimate of the severity of ischemia. This test is performed by having the patient elevate the leg for at least 60 seconds, after which the color is observed. The leg's degree of pallor correlates well with the degree of ischemia. The patient is then asked to be seated, and the time required for venous filling is noted. Normally, the veins should fill within 15 seconds, and more than 20 seconds is distinctly prolonged. After the feet have been dependent for about one minute, the degree of rubor is noted. The degree of rubor varies directly with the severity of ischemia.

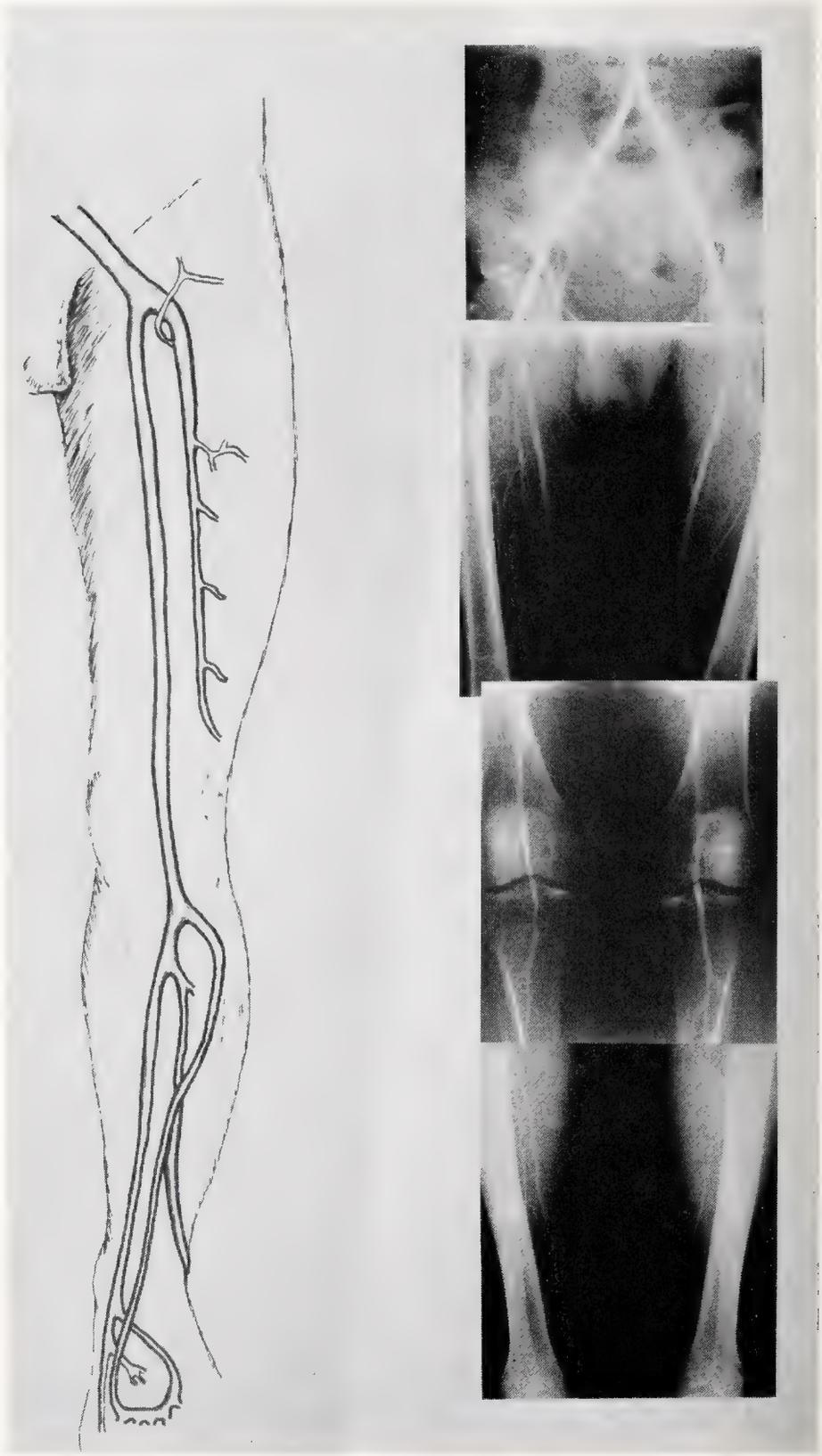
Thermography, plethysmography, and other measures to quantitate blood flow

1. Symptoms of severe ischemia.

Claudication
Paresthesias
Rest pain
Ischemic neuropathy
Ulceration
Local gangrene
Irreversible gangrene

Severe ischemia

2. Representative arteriogram.



have been used but are rarely helpful. Arteriography is performed to document the presence of good arterial inflow and to give an estimation of the arterial runoff. Full arteriography of the leg is important and should include adequate visualization of the vessels of the popliteal "trifurcation" down to the foot. If contrast is seen in collaterals at a given level but is not seen in a named major vessel, this may be taken as evidence that the major vessel is occluded. A representative arteriogram is demonstrated in Fig 2.

Treatment

Treatment is divided into medical and surgical categories. All patients are advised to stop smoking. Obese patients should lose weight. Efforts to improve collateral blood flow to the extremity include a regimented exercise program for those patients who present with only claudication. The patient should walk slightly past the point of claudication at least four times per day. Other adjunctive measures are extremely important. Great care should be taken to protect the feet from minor trauma. The patient should be made to fully understand the importance of avoiding injuries to the foot from such minor activities as trimming the toenails. Nothing hot or very cold should be applied to the feet, and no strong antiseptic solutions should be applied to the feet.

The use of drugs in the treatment of ischemia of the legs is controversial. Vasodilators have not proven to be useful in the opinion of most authorities, and we concur. Anticoagulants are useful in managing episodes of acute ischemia, but are not efficacious in the treatment of chronic arterial disease. Drugs and dietary programs to lower blood lipids probably have no effect on established arteriosclerosis, but may be beneficial in preventing progression of the disease.

The use of lumbar sympathectomy in managing ischemic disease is also somewhat controversial. It is known that sympathectomy does increase blood flow to skin, but causes little change in muscular blood flow. If there is no contraindication, we recommend that sympathectomy be done as an adjunct to femoropopliteal reconstruction in patients with ischemic lesions of the feet or toes, or in patients who have a strong vasospastic component to their disease. Sympathectomy may also be used in patients who have arterial lesions which are not amenable to bypass or endarterectomy procedures, but who have early ischemic changes in the feet. The procedure is generally not helpful in patients over 70 years of age. The effect of sympathectomy, although variable, generally lasts for at least three to six months. Ischemic ulcerations may heal during that time, however, averting amputation of the limb.

Direct reconstruction of femoropopliteal occlusion may be accomplished by a variety of techniques. The preferable approach is bypass of the occluded artery using the reversed saphenous vein. Criteria for successful bypass include an adequate arterial inflow and runoff, as well as an adequate

3. Results of femorotibial bypass procedures.

	Femoro-posterior Tibial	Femoro-anterior Tibial or Dorsalis Pedis	Femoro-peronal	Total	%
No. operations	16	4	6	26	
Initial patency	13	3	4	20	77
Patent-amputation	1	1	0	2	7.7
Initial limb salvage	12	2	4	18	69
Early occlusion	3	1	2	6	23
Late occlusion	2	0	1	3	11.5
Late patency	10	2	3	15	57.7

saphenous vein. Approximately 25% of patients are not candidates for the procedure since the saphenous vein is either too small, too short, or is not present because of a previous vein stripping procedure. In patients who do not have an adequate saphenous vein and in whom a segment of popliteal artery above the knee joint is suitable for anastomosis, a woven or knitted Dacron prosthesis is an acceptable alternative. Crawford has stated that this type of bypass prosthesis has been used in more than 2,500 patients, with an 80% two-year patency rate in patients who had adequate runoff and in which the graft did not cross the knee joint.[2] Fresh cadaveric venous homografts have been used in a small number of patients by Ochsner with encouraging results.[12] Similarly, purified bovine heterografts have been used and several authors prefer them to Dacron prostheses.[6,15] Techniques to cause dilatation of the small saphenous vein have been described by Turcotte and others, and are occasionally useful.[18] Use of the cephalic vein for bypass has been reported, but has not gained popularity in this country.[17] Femoral endarterectomy is now rarely used as a method of reconstruction, since results are far superior with bypass grafting techniques.[4]

Patients with severe ischemia and severe associated illnesses occasionally may be benefited by lesser procedures which can be performed under local anesthesia. Miller and his associates have described six patients with severe concomitant illnesses who were treated by profunda revascularization utilizing local anesthesia.[11] Techniques of local endarterectomy or patch angioplasty are used in these instances.

Patients without an acceptable popliteal artery for distal anastomosis formerly had no choice but amputation. In recent years Tyson,[19] Garrett,[7] Bernhard,[1] and others have popularized femorotibial bypass grafting for the severely ischemic limb. In a recent report, Tyson and Reichle were able to salvage 51 of 79 limbs in which femorotibial for femoroperoneal bypasses were performed.[20] Distal revascularization procedures for arteriosclerotic occlusion have been performed on 26 patients at the University of Texas Medical Branch hospitals. The results are seen in Fig 3.

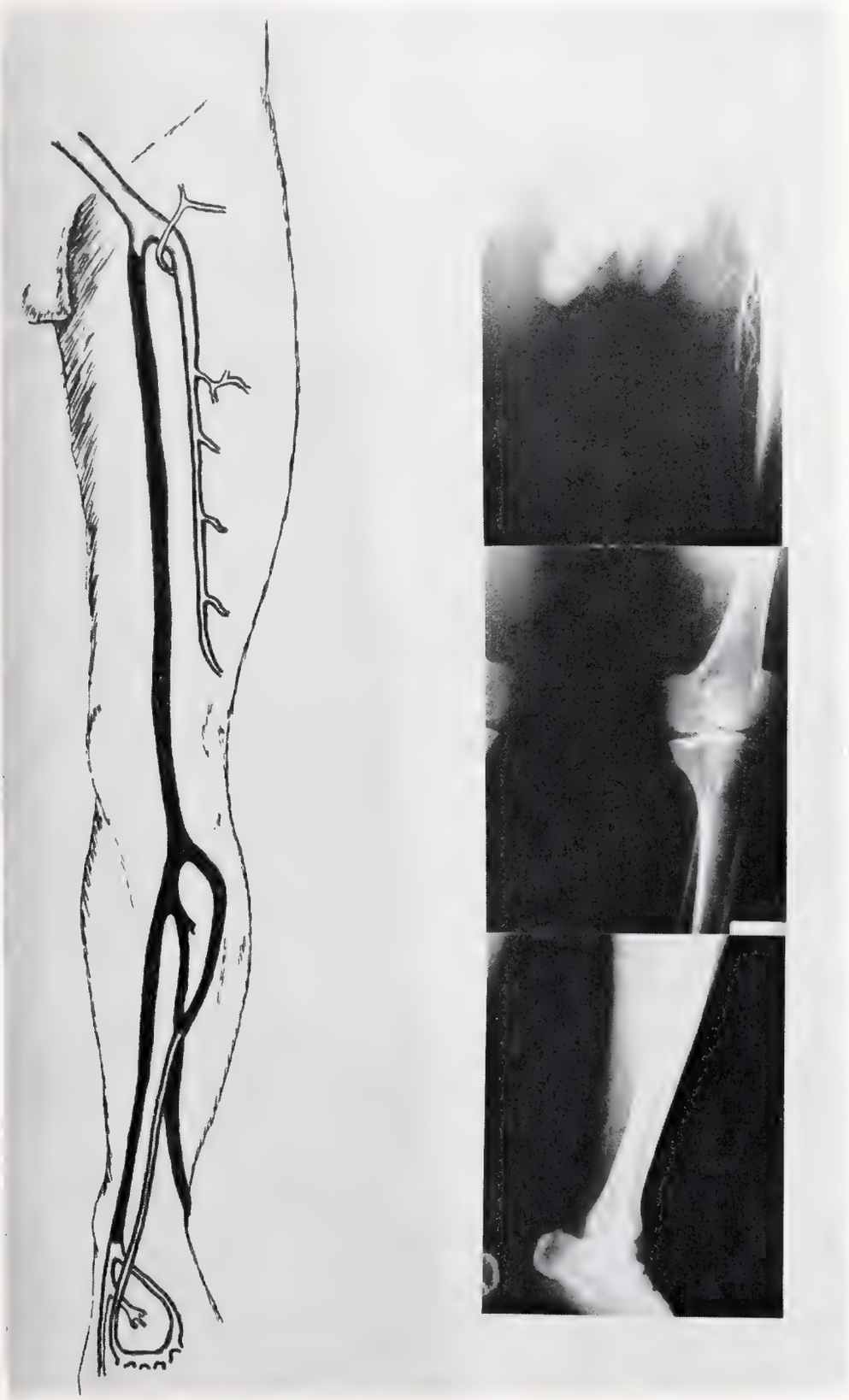
Figs 4 and 5 show the preoperative and postoperative arteriograms on a representative patient. This was a 64-year-old man who complained of severe rest pain in the foot. Preoperative arteriography revealed femoropopliteal occlusion with reconstitution of only the dorsal artery of the foot. Successful femorodorsalis pedis bypass was performed with complete relief of rest pain. The patient was able to return to work.

A total of 31 patients with infrapopliteal occlusion have undergone operation. Femorotibial bypass was performed in 26 patients. Five patients had only exploration of the distal vessels, and were found to have vessels unsuitable for bypass. All five required amputation, three above the knee, two below the knee. Since the exploration of distal vessels and the performance of this type of bypass adds little to patient morbidity, and since the alternative is a major amputation, it would seem wise to consider this procedure in more cases of early gangrene of the extremities or pregangrenous symptomatology.

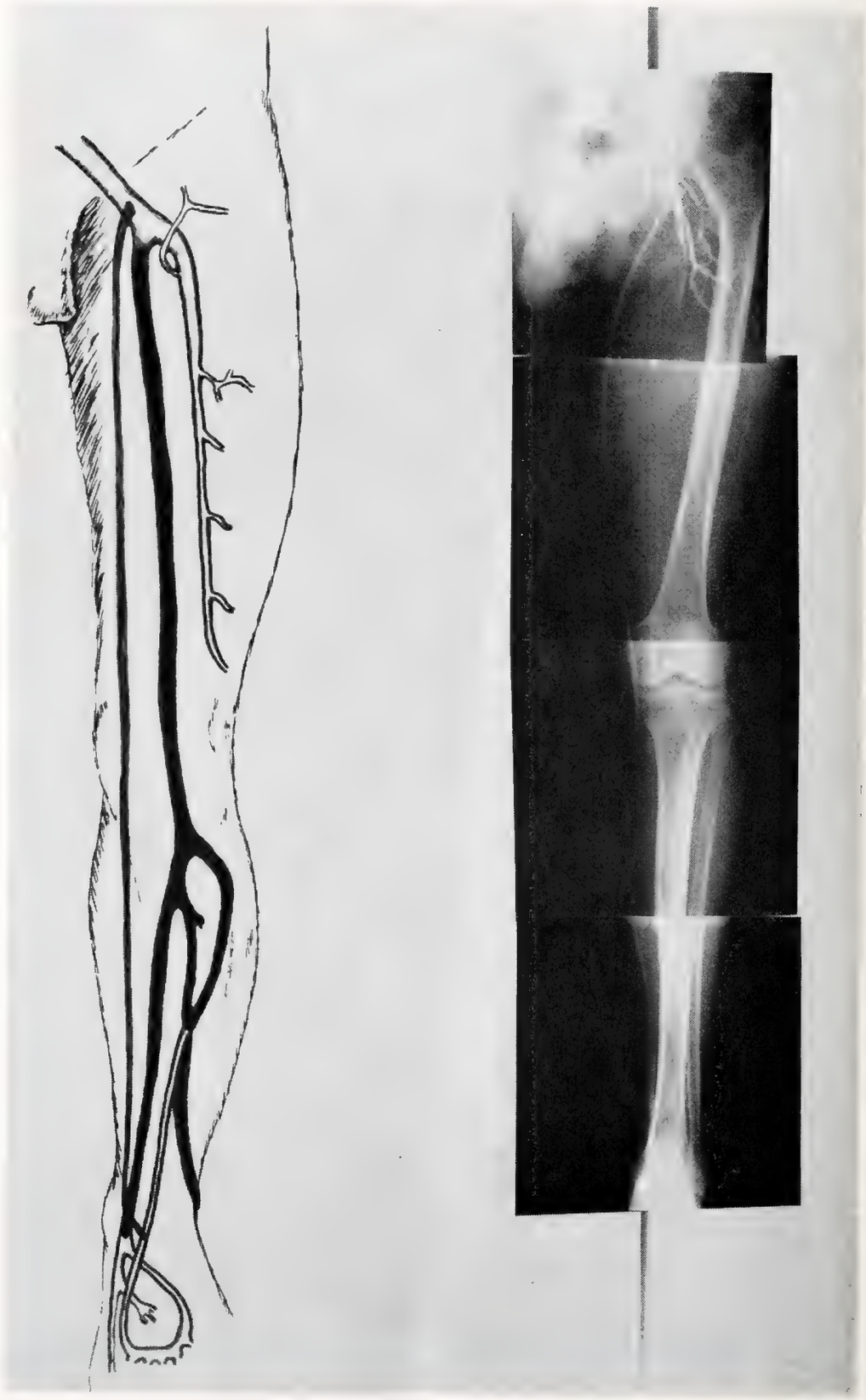
Complications

Complications of femoropopliteal surgery are of immediate or long-term types. Hemorrhage and thrombosis constitute the early problems. Early thrombosis may be related to technical error, and patients who

4. Preoperative arteriogram.



5. Postoperative arteriogram.



appear to have adequate runoff and who have early thrombosis of the graft should have re-exploration in an attempt to find and correct any technical problem. Hemorrhage is most frequently caused by slippage of a ligature off one of the branches of the saphenous vein utilized for bypass purposes. Evidence of hemorrhage should prompt immediate re-exploration.

Infection of the wound or graft may occur. Graft infections are uncommon but represent a severe problem in patients in whom a Dacron prosthesis is used. For this reason, antibiotics (Keflin, Ampicillin) are administered routinely before and after surgery. More than 50% of patients develop edema of the leg postoperatively due to disruption of groin lymphatics.[13] This should be treated by elevating the limb while the patient is in bed. The edema gradually subsides with continued activity and does not present a problem in most cases.

One of the late complications is progression of disease in the proximal and distal vessels which may lead to occlusion of the graft. The development of arteriosclerosis in the venous bypass graft has been reported, but appears to be uncommon. Similarly, false aneurysm formation or aneurysmal changes of the venous grafts appear to be rare.

Results

Results depend on a number of factors, but in general are related to the indication for the operation and the quality of distal runoff. Darling and Linton report an 80% two-year patency rate and 65% five-year patency rate of femoropopliteal saphenous vein bypass grafts.[3] Experience at other institutions, including our own, has yielded remarkably similar results. Interestingly, those patients who have the bypass performed for ischemia appear to have as good results as those in whom claudication is the indication for operation. Preoperative development of local areas of gangrene in the extremity does decrease the success rate of the operation, as documented by Koontz and Stansel.[9]

Our results of distal revascularization procedures are similar to those cited in several other series.[1,7,19,20] Long-term followup, however, is less complete on these patients as compared to followup on standard femoropopliteal bypass procedures.

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Very briefly, a PSRO will at first monitor the medical services paid for by Social Security—Medicare and Medicaid. The PSRO can determine if the patient should be hospitalized, how long he should be hospitalized, and standards or "norms" to govern the course of treatment in the hospital.

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RESULTS OF PSRO

The Cost Factor—Cost seems to be a basic issue at the root of the PSRO legislation. In 1972 Medicare was paying out over $8.5 billion, a staggering figure compared to projected estimates in 1965 when the program became law. Lawmakers at that time did not accurately foresee the heavy use of benefits, advances in medicine, or the sharp rise of inflation which were to occur. In addition, some aged persons are getting care that had been previously unavailable to them.

These predictable cost increases, not alleged physician or patient abuse of the programs, have been responsible for the high level of spending.

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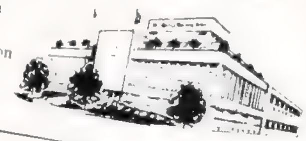

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MONDAY, MAY, 27, 1974

Bad Medicine

TEXAS DOCTORS have made it official: They are going to fight against Professional Standards Review Organizations. Power to them, for PSROs, unknown as they are to the general public, are bureaucratic excrescences of really dangerous caliber.

They came into being with the 1972 Social Security amendments. Congress' motive in creating them was simon-pure—to make sure doctors gave only "medically necessary" treatment to Medicare and Medicaid patients. To that end, Congress ordained that PSROs be set up on a regional basis by Jan. 1, 1974. ...r a 2-year trial run, the secretary ...W will institutionalize them.

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...a disturbing ... and never ...octor-con-stituted They are adjuncts nevertheless of the Department of Health, Education and Welfare. Never before has government intruded so far into the practice of medicine.

As a matter of abstract justice, there ought to be some way to keep Medicaid and Medicare patients' doctors from prescribing unnecessary treatment. This much is easy to admit. But PSROs are likely to do far more harm than good.

They are the entering wedge for government medicine—for Washington's take-over of the whole profession. If government can prescribe treatment standards for Medicare and Medicaid patients, why not for all patients?

Good question. For government may soon be doing just that. President Nixon's health insurance proposal would put all health care under PSRO supervision. So much, in that case, for your doctor's freedom to exercise his own judgment. He would treat his patients the way the PSRO told him to treat them. No better, no worse.

But Texas doctors, through the Texas Medical Association, are going to take legal and legislative action against the PSRO concept. And so are the doctors of other states. They want PSROs wiped off the statute books. They should fight as hard as they can; for this is one battle they cannot afford to lose.

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To help you inform your patients about the impact of Professional Standards Review Organizations (PSRO), TMA has prepared a pamphlet that is available to you in quantity for the asking. Your wide distribution of this leaflet will assist in TMA's campaign to alert the public to the serious effects of PSRO, including its potential for interfering with doctor-patient relationships and the confidentiality of patient records.

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Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)
Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.
Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)
All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.
Tetracyclines are present in milk of lactating women taking tetracyclines.
To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.
Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).
Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
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Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.
Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
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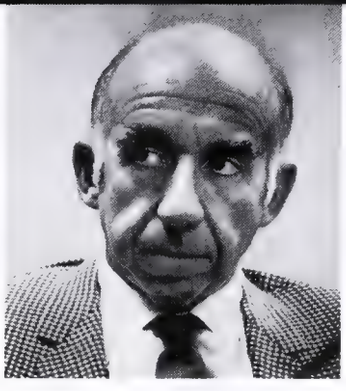
Encino, California

"I may be prejudiced, but I ar very much in favor of the detail me I meet. Most of them are knowledg able about the drugs they promote and can be a great help in acquaint ing me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealing with health problems in this countr there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center research people, and academic people have and that's in all likeliho on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in this

Opinion & Dialogue

He a Source of Information?

Yes, with certain reservations. e average sales representative s a great fund of information out the drug products he is re- onsible for. He is usually able to swer most questions fully and elligently. He can also supply prints of articles that contain a eat deal of information. Here, , I exercise some caution. I usu- y accept most of the statements d opinions that I find in the pers and studies which come m the larger teaching facilities. goes without saying that a physi- n should also rely on other urces for his information on armacology.

aining of Sales Representatives

Ideally, a candidate for the sition as a sales representative a pharmaceutical company ould be a graduate pharmacist o has a questioning mind. I don't nk this is possible in every case, d so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

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pacity they are indeed useful; rticularly in the fact that they seminate broadly based educa- nal material and serve not just "pushers" of their drugs.

e Other Side of the Coin

Obviously, the pharmaceuti- companies are not producing all s material as a labor of love— y are in the business of selling ducts for profit. In this regard ambitious and improperly moti- ed sales representative can rt a negative influence on the cticing physician, both by pre- nting a one-sided picture of his duct, and by encouraging the ctitioner to depend too heavily drugs for his total therapy. In se ways, the salesman has often torted objective reality and dermined his potential role as an ucator.

e Industry Responsibility

Since the detail man must be information resource as well as epresentative of his particular armaceutical company, he ould be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.,* the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

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Outpatient surgery

Linda C. Stehling, MD; Howard L. Zauder, MD, PhD

The spiraling cost of health care, the relative shortage of hospital beds in some parts of the country resulting from increased demands for services, and recent federal legislation designed to curtail expenditures for medical care have rekindled an interest in outpatient surgery. Our colleagues in the British Commonwealth have long performed surgery of appropriate magnitude in their "casualty departments" on an outpatient basis. The oral surgeons' record of using general anesthesia in performing surgery on ambulatory patients is admirable.[1] Nevertheless, sporadic attempts to perform surgery under local or general anesthesia on ambulatory patients has met with opposition from the public, the medical profession, and the hospital administrators. Traditionally, hospitals made sufficient profit on short surgical stays to cover deficits in less profitable areas.

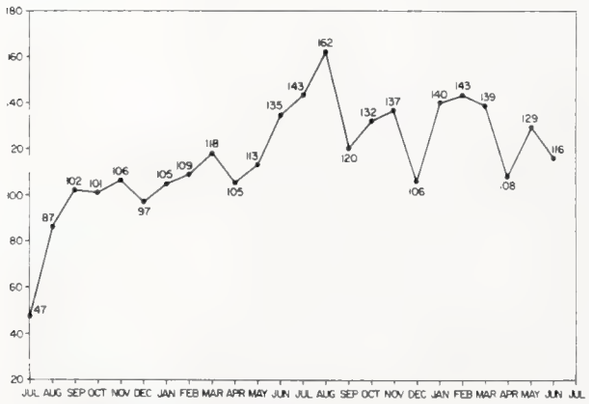
The mid-1960s saw organized programs in outpatient, "in and out", or day surgery instituted at the University of California, Los Angeles[2]; George Washington University Hospital, Washington, DC[3]; and Children's Hospital, Dallas.[4] A prototype freestanding Surgicenter was opened in Phoenix three years ago.[5] All of these programs have three primary aims: to deliver surgical care that is less expensive but comparable in quality to that delivered to inpatients, to prevent hospital-acquired infection, and to maintain the integrity of the family unit. It has been estimated that 20 to 40% of all procedures now performed in general hospitals could be handled on an ambulatory basis.[6] All else being equal, the expense to the patient or third-party carrier for a two-day hospital stay is eliminated.

Hospital-acquired infections are becoming an ever increasing problem. Approximately 8% of all patients admitted to short-term general hospitals acquire an infection during their stay.[7] The acquisition of such infection increases the length of hospital stay by an average of 4.4 days[8] and also adds the cost of antibiotic therapy to the hospital bill.

In response to an increased demand for surgical services at a time of maximum bed occupancy, an outpatient program was instituted at Bexar County Hospital in July 1971. Within a two-year period, 2,800 patients benefited from this program. The acceptance of this innovation by physician and patient alike is evidenced by the rapid rise in utilization of the facility. Plateaus in the case load record (Fig 1) reflect the inability to devote more than one operating room to the project. There is currently a two-week waiting list for use of the single outpatient operating room.

Success of any surgical program for ambulant patients depends upon several factors. Patients must be carefully selected for motivation and ability to follow simple instructions (Fig 2). Surgeons must be indoctrinated to select appropriate procedures (Fig 3) that should not exceed 90 minutes and should not require significant sedation or pain relief in the postoperative period. The history, physical examination, and requisite laboratory examinations must be performed at least 24 hours prior to the contemplated surgery. The former may be recorded on a "short form"; the latter include as a minimum a urinalysis and determination of the hematocrit or hemoglobin concentration.

During the past two years, 2,800 patients have been treated on an outpatient basis. As was to be expected, the facility was used most often by those services performing a large number of simple diagnostic and therapeutic procedures (Fig 4). The youngest patient was three months old; the oldest was 76 years. Thirty-five pa-



1. Case load by month.

1. DO NOT EAT OR DRINK ANYTHING, NOT EVEN WATER from midnight the night before your appointment until after you are dismissed from the hospital.
2. Take a complete bath and wash your hair the night before your appointment.
3. Do not wear fingernail polish, make-up or earrings to the hospital.
4. Get a good night's rest the night before your appointment.
5. Arrive at the hospital, Referral Clinic waiting room, at least 1 hour prior to your appointment.
6. Have a responsible adult with you—this person must wait in the waiting room on the 1st floor of the hospital, and be ready to take you home.
7. DO NOT SMOKE OR CHEW GUM.

2. Instructions to patients for outpatient general anesthesia.

Ophthalmology
- Funduscopic examinations
- Electroretinoscopy
- Extraocular muscle resection

General Surgery
- Breast biopsy
- Excision of soft tissue masses
- Herniorrhaphy

Urology
- Cystoscopy
- Vasectomy
- Circumcision

Otorhinolaryngology
- Endoscopy
- Myringotomy and insertion of polyethylene tubes
- Removal of foreign bodies

Orthopedics
- Closed reductions
- Minor tendon surgery
- Removal of appliances
- Manipulations
- Excision of ganglion

Plastic Surgery
- Scar revision
- Flap release
- Minor reconstructive procedures
- Repair of lacerations

Gynecology
- Dilatation and curettage
- Examination under anesthesia
- Bartholin's gland abscess (incision and drainage)
- Laparoscopy

3. Outpatient surgery procedure.

tients were under one year old, while 196 were between one and three years old. The majority of patients requiring general anesthesia were in the 10-40 year age group (Fig 5) while those operated upon under local anesthesia were somewhat older. In 41% of the outpatients, surgery was performed under local anesthesia administered by the surgeon. The remainder received a general anesthetic, a regional block, or local anesthesia supplemented by intravenous sedation (Fig 6). Recovery room stay (Fig 7) varied with the skill of the anesthesiologist, duration of surgery, and the anesthetic drugs employed. Recovery was most rapid following induction with thiopental and maintenance with nitrous oxide-oxygen, halothane, or trichloroethylene. Recovery following use of cyclopropane was rapid but the postoperative courses were complicated by a high incidence of nausea and vomiting. Relatively prolonged recovery room stays followed anesthesia with thiopental induction and maintenance with nitrous oxide-oxygen and incremental doses of thiopental. This was true even in those cases where light anesthesia was augmented with muscle relaxants. Eighty-nine patients (3.2%) were intubated to maintain the airway or to remove anesthetic apparatus from the surgical field. The duration of recovery room stay was unaffected by this maneuver. Sixteen patients required admission (Fig 8); six of these could have been avoided by more judicious selection and planning of the surgical procedure. Three of the four cases of aspiration pneumonitis were not confirmed by x-ray or laboratory findings. These patients probably would not have been admitted outside the teaching setting.

It may be calculated that there was an aggregate saving to the patients, third-party carriers, and the taxpayers of Bexar

County of $278,400 for the 2,784 patients who did not require admission. This figure is based on the cost of hospital hotel accommodations for two days at the rate of $50 per day. There was also a potential savings of $98,560 brought about by preventing the accumulation of 985 inpatient days required by the acquisition of a nosocomial infection by 8% of these patients. In addition, these 224 patients would have required approximately $22,400 worth of antibiotics. The total savings then was $399,360, or $142.63 per patient. Considering the number of surgical procedures performed in the United States each year, there exists a potential saving of approximately half a billion dollars.

Public Law 92-603 authorizes the secretary of Health, Education and Welfare to fund several demonstration projects to assure that services of high quality will be provided efficiently and economically, and that these services will be paid for in the most effective and equitable way. The authorized areas of experimentation include surgery for ambulant patients. On the basis of experience to date, there can be little doubt as to the outcome of such studies. It may be anticipated that as a next step, the controversial Professional Standards Review Organization will require appropriate procedures to be carried out in selected patients on an ambulatory basis. A proliferation of in-hospital and free-standing outpatient surgery centers invariably will follow.

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Gynecology	1,087
Orthopedics	247
Otorhinolaryngology	117
Urology	721
General surgery	364
Plastic surgery	143
Radiation therapy	70
Ophthalmology	50
Neurological surgery	1

4. Outpatient surgery service.

Under 1 year	35
1-3 years	196
3-10 years	130
10-20 years	426
20-40 years	757
Over 40 years	102

5. Age of patients receiving general anesthesia.

Nitrous oxide-barbiturate	783
Trilene-nitrous oxide-barbiturate	349
Halothane-nitrous oxide	208
Cyclopropane	154
Ethrane-nitrous oxide	5
Ketamine	76
Ether	9
Regional	16
Local	1,154
Local-intravenous sedation	46
Total	2,800

6. Anesthetic agents.

	Range	Average
Gynecology	0.5 -5.5	1.25
Orthopedics	1.25-5.25	1.75
Urology	0.5 -4.75	1.75
General surgery	1.0 -4.25	1.75
Plastic surgery	1.0 -3.0	2.0
Otorhinolaryngology	1.0 -2.0	1.25
Ophthalmology	0.75-2.75	1.5

7. Duration of recovery room stay in hours.

Aspiration pneumonitis	4
Perforation of esophagus	1
Perforation of uterus	3
Severe postoperative pain	2
Complicated surgical procedure	3
Oversedation by surgeon	1
Postoperative bleeding	2
Total	16

8. Patients requiring admission.

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Use of automatic staplers in vaginal hysterectomy, anterior colpoplasty, and posterior colpoperineoplasty

Richard O. Albert, MD

A technique of vaginal hysterectomy, anterior colpoplasty, and posterior colpoperineoplasty is described, using the GIA Auto Suture instrument and the TA 30 Auto Suture instrument. The technique described is faster than the usual method of doing these operations, it makes them easier to do, the morbidity is much less, and the results have been excellent.

There was a time when all gastrointestinal anastomoses and closures had to be done by hand, with each single stitch being placed by the time-consuming process of a series of motions and maneuvers with the needle, needle holder, and other instruments. In recent years, the Russians developed automatic suturing (stapling) devices,[1] and these instruments have now been perfected in this country by the United States Surgical Corporation. With their use it is now possible to do these anastomoses and closures much more rapidly, safely, accurately, easily, and adequately, to the great advantage of both the patient and the surgeon.

The primary purpose of these instruments was for use in the gastrointestinal tract, and the instrument has been adequately described[5] and its use in the gastrointestinal tract documented,[4,7] however, it was found possible to use them in other situations for other purposes as well, for example in pulmonary resection,[2] wedge resection of the lung, or in compartmentation of the inferior vena cava.[6] The rows of wire sutures could be rapidly placed across the pedicle of any suitable lesion and the mass excised, and this lent itself well to adnexal surgery.

In abdominal hysterectomy, with or without salpingo-oophorectomy, the instruments likewise could be of assistance in placing the sutures across the broad ligaments from the salpinx to the cervix and closing the end of the vagina at the cervix.[3] Thus the uterus could be removed much more quickly.

Since the use of automatic suture devices could be so helpful in abdominal hysterectomy, thought was given to their use in vaginal hysterectomy. One of the terminal closing instruments (either the TA 55 Auto Suture instrument, which places a double row of wire sutures 55 mm in length, or the TA 30 may be used on the broad ligaments in abdominal hysterectomy, and the TA 30 or TA 55 may be used for the end of the vagina,[3] but the size and shape of the larger instruments precluded their use in vaginal hysterectomy. However, there is another automatic suture device, the gastrointestinal anastomosis or GIA Auto Suture instrument, which is of a completely different shape and which can also be used in the broad ligaments. A method or technique has now been developed for its use in vaginal hysterectomy, anterior colpoplasty, and posterior colpoperineoplasty. I have used the GIA in the broad ligaments of 36 vaginal hysterectomies and in 42 anterior and posterior repairs, and the TA 30 at the uterine cornua of 33 vaginal hysterectomies. (This does not include the many times I have used the Auto Suture instruments in the broad ligaments or at the cornua during abdominal surgery, where several times I have even been able to apply the TA 90 instrument on each side so that only these two applications sufficed

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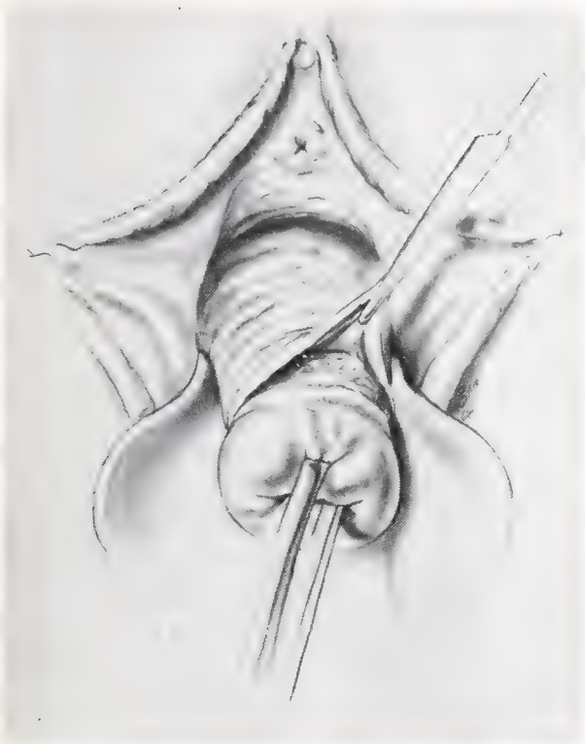


1. The cervix is grasped with a tenaculum or a suture, according to preference, and a circumferential incision made around it. Blunt dissection is used to free the uterus from the bladder anteriorly and from the rectum posteriorly, until the peritoneal pouches are entered anterior and posterior to the uterus. This dissection is carried out to free the sides of the cervix as much as possible so that the tissues of the uterosacral and cardinal ligaments are thinned down somewhat. If these tissue masses are too thick, they may interfere with the closure of the GIA Auto Suture instrument.

2. This drawing shows the placement of the GIA instrument directly adjacent to the uterus, reaching up as far as the ovary. Great care must be taken here to insure that all pelvic adhesions that might interfere are freed. The jaws of the instrument must be repeatedly checked to be sure that no loop of bowel, omentum, fallopian tube, or other tissue is between them.

to completely remove the uterus and to close the end of the vagina as well.)

Technique

The cervix is grasped with a tenaculum or suture, and a circumferential incision made around it through the vaginal mucosa (Fig 1). Blunt and some sharp dissection is used to free the cervix and uterus anteriorly and posteriorly, and both peritoneal pouches are entered. This now leaves the uterus held or supported only by its lateral attachments, and it is possible to reach in and explore fairly well to free all or most of the adhesions that there may be, such as from classical cesarean section or pelvic inflammatory disease, which might interfere with the removal of the organ.

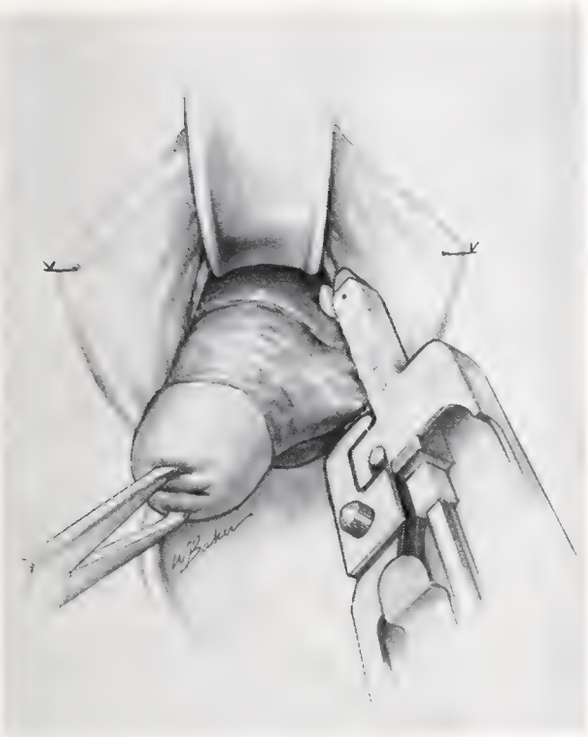
When the surgeon has assured himself that the field is clear, the two halves of the GIA instrument are inserted adjacent to the uterus and loosely positioned with one jaw or fork of the instrument in the anterior peritoneal pouch and the other jaw in the posterior peritoneal pouch (Fig 2). They are held with the hand, while the surgeon again assures himself that the field is clear and nothing extraneous is caught between the jaws of the instrument. Then, and only then, are the two halves of the GIA mated to each other and locked (Fig 3), and the pushbar/knife driven home, thus setting the four rows of sutures and cutting between the two inner rows in a single movement. These sutures are wire staples that close in the shape of the letter B, grasping and holding the tissue that passes through them. The same procedure now is done on the other side of the uterus. I prefer to have the lock side of the instrument facing medially on each application, as it can be better seen and hence better controlled in that way.

The uterus is now free except for the ovarian ligament, the round ligament of the uterus, and the isthmus of the fallopian tube at each uterine cornu. The cervix can now be pushed in and the suture lines of each side inspected. Usually the uterine arteries will be actively spurting, so a figure-of-eight suture ligature of atraumatic chromic 1 or 0 or 00 catgut is applied to control each one (Fig 4).

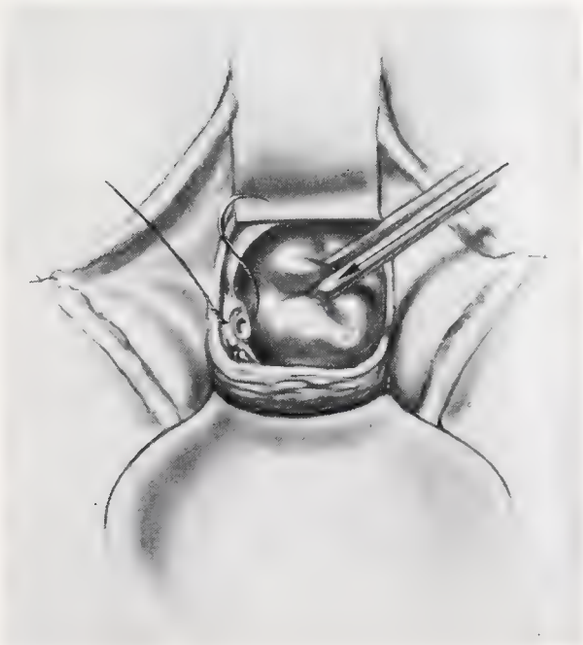
The cervix is now pulled out again, and it will come down much farther. Any remaining adhesions are cleared away, a uterine cornu is brought down as well as possible, and the TA 30 Auto Suture instrument is inserted alongside the uterus and applied to all the cornual attachments (Fig 5). When it is certain that there is nothing else in the grip of the instrument, the two rows of staples are set, and the contained sutured tissue severed by cutting against the medial aspect of the instrument. Some surgeons will prefer to grasp the uterine fundus with a tenaculum and bring it out into full view, and then apply the TA 30 (Fig 6). The instrument may be facing either up or down, depending on the surgeon's preference. When both cornual attachments are severed, the uterus is removed.

The interior of the pelvis is now inspected, salpingectomy and/or oophorectomy is performed if indicated, and anything else that seems advisable is done. When all is well, the peritoneum is closed in a transverse line with continuous simple sutures of atraumatic chromic 00 catgut, the uterosacral and cardinal ligaments approximated in the midline with a couple of sutures of atraumatic chromic 1 catgut, and the vaginal mucosa closed with atraumatic chromic 00 catgut.

If, as is usually the case, colpoplasties are to be done, the vaginal mucosa is not



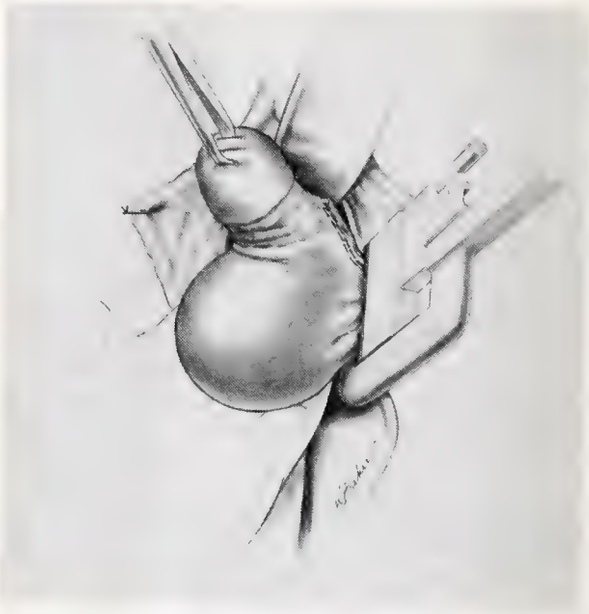
3. When the surgeon has positively assured himself that the jaws of the GIA are grasping only what they should, then and only then are the two halves of the instrument mated together and locked, and the pushbar driven home to place four rows of sutures and cut between the two inner rows. Note that the control or lock side of the instrument is facing medially here in its application on the left side of the uterus. On the right side of the uterus the instrument would be applied upside down so that the lock and driver side of the instrument again face medially, since in that position it is easier (and hence safer) to see and work the instrument.

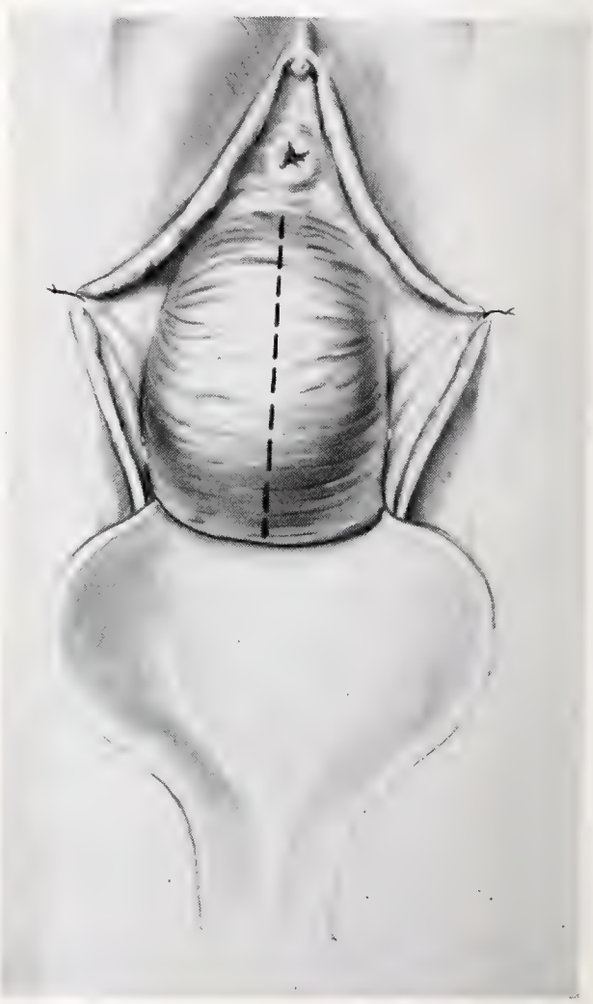


4. Ligation of the uterine arteries is usually done right after the GIA Auto Suture instrument has been applied to each side of the uterus. The uterus is pushed in to give good exposure, and a suture ligature placed in the cut end of each uterine artery. The artery is severed by the Auto Suture instrument, but it can be easily found since it is held by the wire sutures and cannot retract out of sight. It cannot be hand tied because it is off flush with the soft tissues in the GIA suture line and does not project up at all. Usually it will be actively bleeding, but even if it is dry it should be ligated.

5. Both sides of the uterus are now free up to the uterine cornu. Note the two rows of wire sutures directly adjacent to the uterus, which control back bleeding and which come out with the uterus. At this stage, the pelvis is again checked to free all remaining adhesions which may be in the way. The TA 30 Auto Suture instrument is placed at each uterine cornu to encompass the ovarian ligament, the round ligament, and the isthmus of the fallopian tube. The wing nut is tightened and the handle squeezed once to place the two rows of wire sutures (after it is certain that no knuckle of bowel is caught between the jaws). The ligated structures are severed on the medial side of the instrument by cutting with a scalpel directly into a little groove on the instrument. The uterus is thus freed and removed. If the uterine arteries have not yet been ligated, a suture ligature is now placed in each one.

6. Some surgeons will prefer to deliver the fundus of the uterus and then apply the TA 30 instrument to the structures at the uterine cornu, just as some prefer to do this in the standard vaginal hysterectomy. The instrument can be applied either up or down, whichever is more convenient.





7. If anterior colpoplasty is to be done, a midline sagittal incision is made through the anterior vaginal mucosa from the site of the cervix anteriorly nearly to the external urethral meatus. Blunt and some sharp dissection is used to separate the mucosa from the underlying bulging bladder.

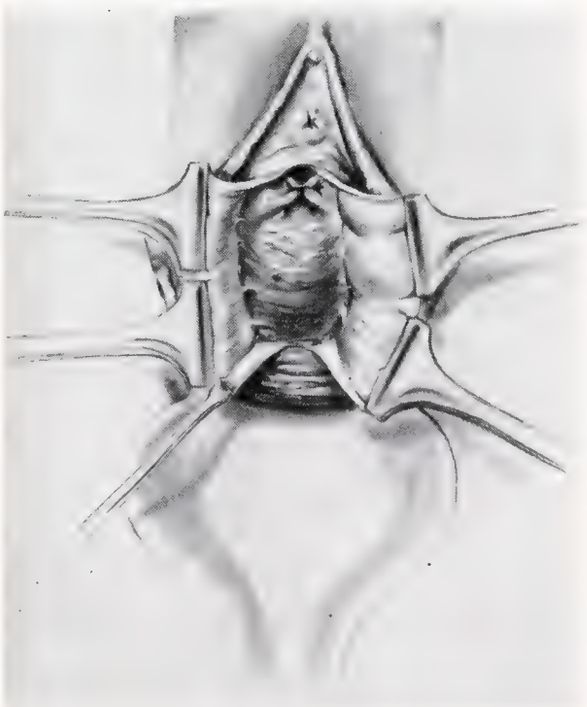
closed completely at this stage or is not closed at all. The colpoplasties may of course be done without the vaginal hysterectomy. A midline sagittal incision is made through the anterior vaginal mucosa (Fig 7) from this wound or from the cervix nearly up to the external urethral meatus, the mucosa freed from the underlying bladder, and the bladder reduced by continuous or interrupted simple sutures of atraumatic chromic 0 catgut in the perivesical tissues (Fig 8, 9).

Now, the GIA Auto Suture instrument can be used again. The edges of the vaginal mucosa are approximated and held with about four or five Allis or similar clamps, and pulled inferiorly. The jaws of the GIA instrument are inserted into the vagina, one on each side of the double thickness of the vaginal mucosa (Fig 9), and as they are brought together in the midline, the excess vaginal mucosa that needs to be excised is now protruding from between the inferior aspect of the jaws of the instrument (Fig 10). The jaws are inserted as deeply into the vagina as possible, care being taken to aim them in the axis of the vagina, and they are then mated and the pushbar driven home. The mucosa is thus neatly closed and the excess mucosa excised in one motion (Fig 11), but it will still be attached at the deep end since the knife does not cut between the last two sutures. This must now be cut with a scalpel or scissors. The deep end of the mucosa must be sutured by hand because the GIA instrument is not long enough to reach the end of the vagina.

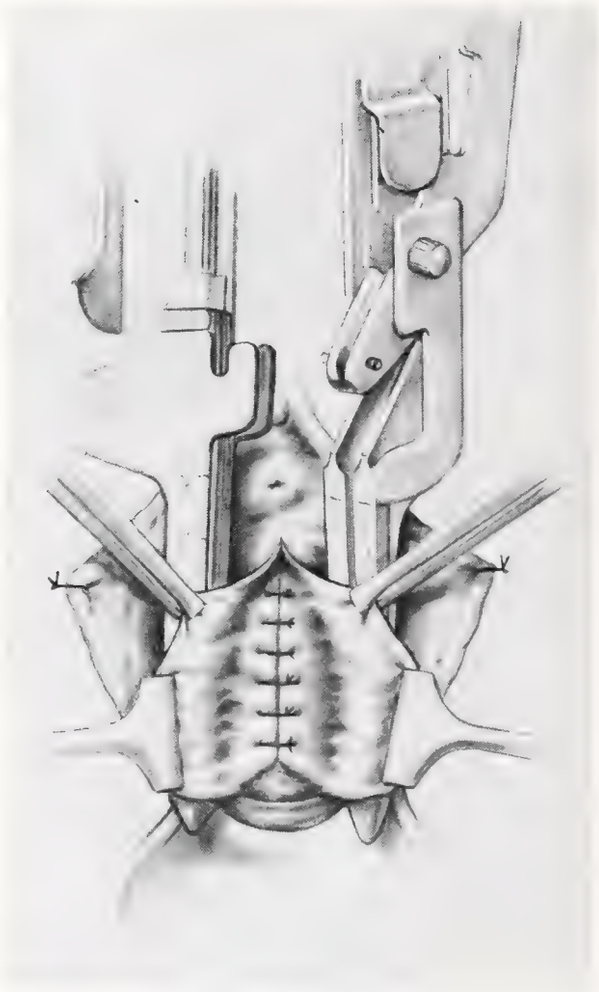
The posterior colpoperineoplasty is now done in a similar fashion. A midline sagittal incision is made in the posterior vaginal mucosa from the perineum nearly up to the site of the cervix, and the underlying bulging rectum dissected free and reduced by chromic 0 sutures, which include build-up of a good thick perineal body. Again, now, the edges of the mucosa are approximated and held with the Allis clamps and the GIA Auto Suture instrument applied to close the posterior vagina and excise the excess vaginal mucosa. And again, the GIA does not reach to the end of the vagina, so the end of the mucosa remaining attached must be cut off with a scalpel and the remaining opening sutured by hand, just as in the anterior colpoplasty.

Comment

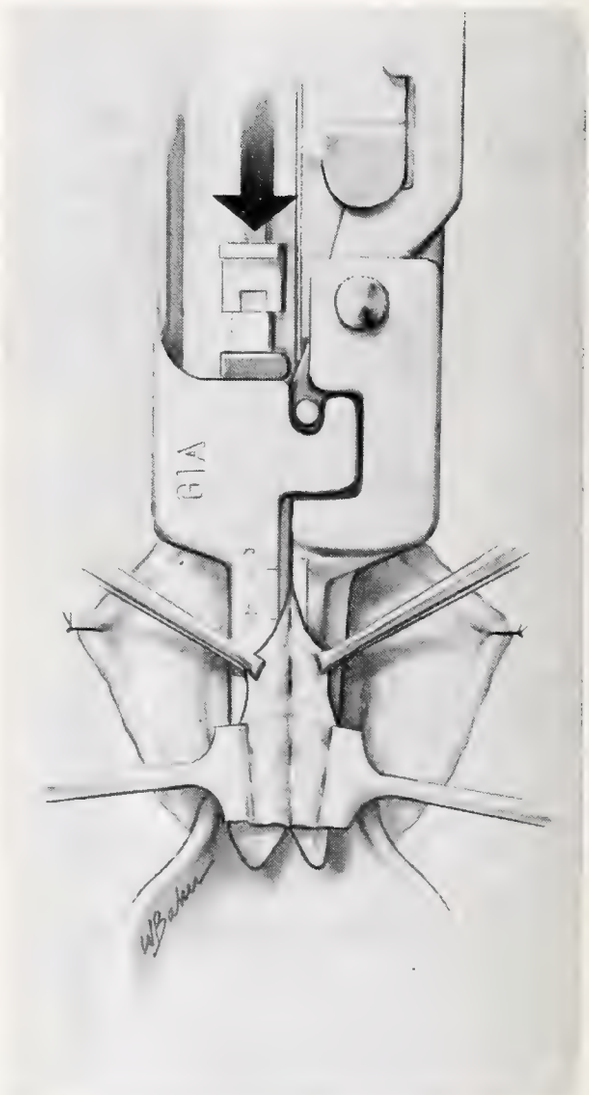
The use of the Auto Suture instruments considerably shortens the operating time involved in doing a vaginal hysterectomy, anterior colpoplasty, and posterior colpoperineoplasty, and in general the hemostasis will also be better. However, there are some



8. When the vaginal mucosa has been freed rather far out laterally, the bulging bladder is reduced by numerous continuous or interrupted simple sutures of atraumatic chromic 0 catgut in the perivesical tissues.



9. The bulging bladder has been reduced by numerous sutures, leaving an excess of vaginal mucosa. The jaws or forks of the GIA Auto Suture instrument are now placed on each side of the excess vaginal mucosa, with the flat of the instrument now transverse and the control or lock side facing the surgeon.



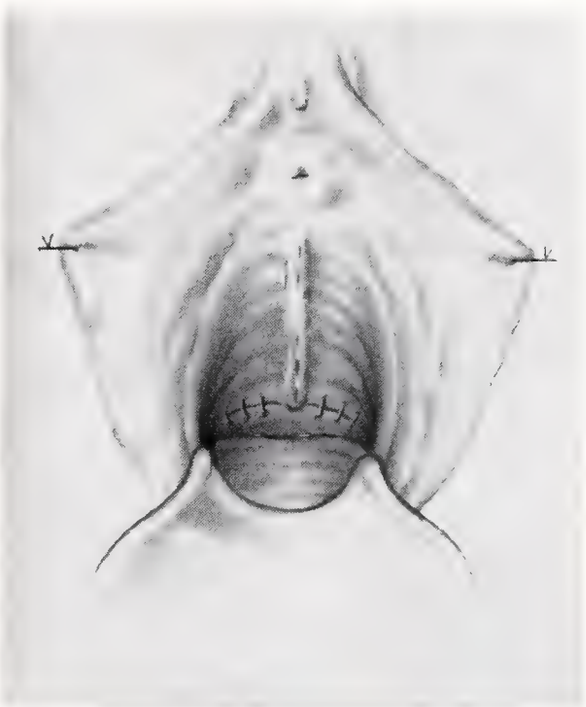
10. The jaws of the instrument are now brought together, the two halves mated and locked, and the pushbar driven home, thus suturing the vaginal mucosa that will remain in the patient with two rows of staples and severing the excess mucosa at the same time. In order to make a new vagina in the right shape, the GIA instrument must be applied with the jaws parallel to the long axis of the vagina. Just as in any anterior and posterior repair, care must be taken not to remove too much vaginal mucosa.

pitfalls, and the surgeon must be cognizant of them in order to avoid them and to correct problems when they occur.

One must be sure that all pelvic adhesions that might interfere with the safe application of the instruments are freed before the application. I have not yet brought out a knuckle of bowel with the uterus, but this could happen. It must be guarded against by careful and thorough separation of any adhesions that there may be, and by repeatedly checking the instruments *before* the knife is driven home. The only complication or untoward result I have had is that one time the left ovary came out with the uterus. Perhaps this could have been prevented by more thorough or careful checking to be sure that the instrument was medial to the ovary. As it was, the ovary was implanted into the fat of the lower anterior abdominal wall just external to the fascia, where it is, presumably, still functioning.

Another possible problem is that the parauterine tissues may be too thick to permit the instrument to close. This has not given any trouble as yet, though at times the instrument has been harder to close than others. This can be prevented by more thorough clearing of the tissues on the anterior and posterior aspects of the uterus, especially in the cervical region, where the uterosacral and cardinal ligaments make up a rather thick mass. However, it must be remembered that the more dissection is done here, the more bleeding there will be, so the advantages of one must be weighed against the disadvantages of the other. Conceivably, the tissue could be so thick here that a bite of it must be sutured and cut first before the GIA can be applied. If so, that can be done, but I have not yet done it.

As in any operation anywhere any time,



11. When the operation is finished, the suture line will be much more beautiful than that shown here, and the two sides of the vaginal mucosa will be so closely approximated that their juncture will be practically invisible. In a short incision and repair, such as is shown here, the GIA instrument may completely close it, but usually the incision is longer, in which case the instrument will not be long enough. Since the instrument places four rows of sutures and cuts between the two inner rows as far as the last two sutures, it follows that the severed excess vaginal mucosa with its rows of sutures will still be attached at its inner or deep end. This must be cut with a scalpel, and that spot and any remaining dehiscence closed by hand. The posterior colpoperineoplasty is performed in essentially the same manner, with the addition of the building up of a good thick perineal body. Again, care must be taken to hold the instrument in the long axis of the vagina, and not to remove too much mucosa.

excessive bleeding could occur, but it is felt to be less likely with the use of the Auto Suture instruments because the staples are much more evenly and consistently placed than is possible to do by hand, and they are always overlapping so that a majority of the bleeders are caught by two sutures, making adequate hemostasis likely. Twice in the area of the attachments of the uterine cornu it was necessary to place a suture ligature to control bleeding, but many times it has been necessary to do the same thing after having tied a vessel by hand.

An exception to this is the uterine artery and, presumably, any other artery of similar caliber and pressure. The first time I used the GIA instrument adjacent to the uterus in a vaginal hysterectomy, I broke the knife out of the pushbar for the instrument beforehand so that there would be no cut between the sutures. A cut with a scalpel was made directly adjacent to the uterus to free it, and all four rows of sutures thus stayed with the patient. This was to ensure that four rows of sutures would be there to hold the uterine artery—but the artery bled anyway. Since then the knife has remained in the instrument, and thus only two rows of sutures are left in the patient on each side, and the result has been the same. The uterine artery bleeds, but it is held in the very neat suture line so that it is clearly visible and cannot retract. Thus it is a very simple matter to see it, grasp it, and place a suture ligature to control it. If the artery is not bleeding too much (which it usually isn't) and it is more convenient to do so, these suture ligatures may be placed after the uterus has been completely removed, and then they can be placed with much better exposure and visibility. The two rows of sutures that remain attached to the uterus on each side are also helpful in that there is no troublesome back bleeding which can interfere with visibility. The uterine arteries practically always bleed, but on one occasion when they didn't bleed (perhaps the patient was in shock) they were sutured anyway, since the ends were so easy to see. The uterine arteries always should be sutured, as a postoperative rise in blood pressure certainly could start the vessels to bleeding.

In the anterior colpoplasty and posterior colpoperineoplasty there are also some possible sources of trouble. One of the greatest of these might be the removal of too much vaginal mucosa. That is rather easy to do since it is a little difficult to feel inside the vagina to judge the size accurately when the instrument is in place. Only care and experience will tell the surgeon just how much is enough, just as it is in doing the repairs without the GIA. It should be emphasized that to help in this, the long axis of the GIA instrument must be in the long axis of the vagina, as the tendency is to let the instrument handle fall too low, or to move it up for the anterior colpoplasty and down for the posterior colpoperineoplasty in order to get better visibility.

Another problem that could arise is that, postoperatively, the vagina may be the wrong shape; this may occur if the instrument is not held properly. Again, this will not happen if the long axis of the instrument is held parallel to the long axis of the vagina, and the anterior and posterior suture lines thus made parallel to each other.

On three occasions I used the PGIA (pediatric) cartridge in the colpoplasties. This has smaller sutures that bend into a smaller B, and it was thought that this might make for better hemostasis. However, some of these opened up because the contained tissue was too thick and later some of these tighter sutures cut through the

vaginal mucosa. Therefore, I think that the GIA is better for this purpose.

Healing and Results

Without exception, the postoperative course of these patients has been very good, better than that of patients in whom conventional methods were utilized. The vaginal suture lines look even better than those shown in Fig 11), there is hardly ever any oozing (except from areas sutured by hand), the postoperative vaginal discharge is less in amount and lasts not nearly so long, and the healing is much faster without any build-up of granulation tissue. Usually the vagina is not packed with gauze after surgery, as it is not necessary and sometimes the guaze will catch on the sutures if it is done. A Furacin vaginal suppository may be used postoperatively to help speed healing and cut down odor.

Most of the wire sutures in the vaginal mucosa remain with the patient. They are external when applied, but most of them will bury during the healing process and thus become internal and cause no trouble. Some patients will notice an occasional wire suture that appears on the pad, but if this possibility has been explained to them beforehand it should be no cause for alarm. After two or three weeks or so, some of the sutures will become loose and can easily be picked out in the office. The most I have removed from a patient is 10 or 12, and 5 to 7 is an average. All the rest are buried beneath the vaginal mucosa and are never heard from again, though some of them can be palpated in the submucosa or occasionally are even visible beneath a very thin layer of epithelium. The picking out of the several sutures in the office by pulling with a crochet hook or hemostat causes no discomfort in most patients, while others do complain of a little pain as the wires are unbent and pulled out.

One patient complained of much pain at the fourchette, even after some six weeks. Three wire sutures were palpable here in a subcutaneous position, and these seemed to be the source of the pain, even though these sutures were not supposed to hurt. A small opening was made and two of the sutures were picked out, but the third was left in because the anesthesia was inadequate. A week later she was back again complaining of just as much pain as before, and now palpation revealed only the one remaining suture in what was definitely the tender spot. This time better anesthesia was obtained and the suture—which turned out to be an unabsorbed chromic catgut knot—was removed. After this, the patient healed without incident and complained of no more pain.

Coitus can be resumed in about six weeks. None of the patients have had any vaginal difficulties associated with coitus, nor have their sexual partners complained.

The question has been raised as to whether laceration of the glans penis might be another complication of this operation. To my knowledge this has not occurred; it seems unlikely because the sutures are covered up so nicely by the vaginal mucosa. Any exposed wire sutures can be seen or felt by the surgeon, and it would be prudent for him to pick these out before releasing the patient.

X-Ray Studies

Several of these patients have been studied by the use of x-ray films of the pelvic area, made about a week after surgery and again some three months later after healing has been complete. The wire sutures can be

seen, but in obese women they are not clear and sometimes cannot be counted.

The TA 30 Auto Suture instrument places 11 sutures, arranged in two parallel rows. This is used for the structures at each uterine cornu, and all of course remain in the patient. On x-ray films, these sutures from a little cluster at or even overlying the pelvic brim, and are so close together that they cannot be counted. These sutures remain in a tighter B than the others, which expand slightly, perhaps due to their containing a little more tissue.

The GIA Auto Suture instrument places 32 sutures at a time, arranged in four parallel rows. It also cuts between the two inner rows of sutures for almost the entire distance, leaving the end of the tissue attached only between the last two sutures on each side, which then has to be cut by hand. Theoretically, this would leave 16 sutures in the patient on each side, and 16 sutures would be removed with the uterus. In practice this would probably rarely be the case since with the application of the TA 30 more or fewer than this might be removed. As it happened, in those cases studied, there were 9 sutures on each side in each patient, and these extended from near the cluster of the uterine cornu structures medially and somewhat inferiorly to meet in the midline in the uterosacral ligaments at the deep end of the vagina.

It is in the vagina that the fate of these wire sutures is of the most importance since here they are in contact with the outside world. Theoretically, there should be 16 wire sutures left in the anterior vagina and 16 in the posterior vagina, with 16 being removed with the excess vaginal mucosa at each site, but again it depends on just how much mucosa is cut off by hand and how many sutures with it.

In one patient, the early films showed 15 sutures in the anterior vagina and 11 in the posterior vagina, and the late films showed 11 sutures remaining in the anterior vagina and 10 in the posterior vagina, a total of 21. This is a decrease of four sutures anteriorly and one posteriorly, and in this case my records show that 5 sutures were picked out in the office, so none were shed spontaneously, and here the count was accurate and every single one could be accounted for. In another patient, the early films were not too clear, but the late films clearly showed 15 sutures remaining in the anterior vagina and 7 in the posterior vagina, a total of 22. My records show that 10 sutures were picked out in the office, plus 2 others that were removed from the fourchette with the chromic catgut knot.

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Hydroxyzine HCl is designated chemically as 1-(p-chlorobenzhydryl)-4-[2-(2-hydroxyethoxy)-ethyl] piperazine dihydrochloride.

Actions. Oxyphencyclimine HCl provides long acting suppression of gastric secretion through its anticholinergic action. The mechanism of this action is the inhibition of acetylcholine at postganglionic cholinergic sites in structures innervated by postganglionic parasympathetic nerves and on smooth muscle not so innervated but responsive to acetylcholine.

Hydroxyzine HCl, marketed under the trade name, Atarax®, has been shown clinically to be an effective anti-anxiety agent. It induces a calming effect in anxious, tense individuals without impairing mental alertness. It is not a cortical depressant, but its action may be due to a suppression of activity in certain key regions of the subcortical area of the central nervous system.

***Indications.** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Possibly Effective: As adjunctive therapy in peptic ulcer; irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, functional gastrointestinal disorders); functional diarrhea; drug induced diarrhea; ulcerative colitis, and urinary bladder spasm and ureteral spasm (i.e. smooth muscle spasm).

Final classification of these less than effective indications requires further investigation.

Contraindications. Because of its anticholinergic activity, Enarax is contraindicated in the presence of glaucoma, obstructive uropathy (i.e. bladder neck obstruction due to prostatic hypertrophy), obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis, etc.); paralytic ileus; intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis.

Warnings. Hydroxyzine, when administered to the pregnant mouse, rat, and rabbit induced fetal abnormalities in the rat at doses substantially above the human therapeutic range. Clinical data in human beings are inadequate to establish safety in early pregnancy. Until such data are available, hydroxyzine-containing drugs are not advised in early pregnancy.

In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heatstroke due to decreased sweating).

Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful.

Enarax may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery, or perform hazardous work while taking this drug.

Precautions. Anticholinergics should be used with caution in patients with:

autonomic neuropathy,

hepatic or renal disease,

ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon.

hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension and nonobstructing prostatic hypertrophy; hiatal hernia associated with reflux esophagitis, since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis).

The use of this drug in the presence of complication of biliary tract disease should not be relied upon.

Tachycardia should be thoroughly investigated before giving anticholinergic (atropine-like) drugs since they may increase the heart rate.

With overdosage, a curare-like action may occur.

Adverse Reactions. As with other anticholinergics, oxyphencyclimine HCl produces certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these.

Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis, dilatation of the pupil; cycloplegia, increased ocular tension; loss of taste; headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestation; some degree of mental confusion and/or excitement especially in elderly persons.

Decreased sweating is another adverse reaction that may occur. It should be noted that adrenergic innervation of the eccrine sweat glands on the palms and soles make complete control of sweating impossible. An end point of complete anhidrosis cannot occur because large doses of drug would be required, and this would produce severe side effects from parasympathetic paralysis.

Side effects which occasionally occur with hydroxyzine HCl (Atarax)® are drowsiness, xerostomia, and, at extremely high doses, involuntary motor activity, all of which may be controlled by reduction of the dosage or discontinuation of the medication.

Dosage and Administration. The recommended adult dose is usually one Enarax 5 or one Enarax 10 tablet two times a day or three times a day, depending on individual response. Proper diet and antacids should be used where indicated as concomitant therapy. The safe use of Enarax in children has not been established; therefore, the drug should not be used in children.

Drug Interactions. The potentiating action of hydroxyzine must be considered when the drug is used in combination with central nervous system depressants.

How Supplied. Enarax 5 is available as white scored tablets in bottles of 60. Enarax 10 is available as black and white scored tablets in bottles of 60.

ROERIG Pfizer

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New York, New York 10017

Cholecystectomy aid

Inayat I. Lalani, MD

The following small refinements in performing cholecystectomy have greatly aided me in my practice.

1. After the abdomen is entered, viscera are retracted away from the work field by means of a Weinstein retractor. This retractor eliminates need for at least one of the assistants, and gives an even better field than an assistant using his hand to retract abdominal viscera or a Balfour type of self-retaining retractor.

2. Next, traction is applied on the neck of the gallbladder with a Kelly clamp as usual. A solution consisting of 1 ml of 1:10,000 norepinephrine in 100 ml of normal saline solution is then injected in the fold of peritoneum which is almost always found in the angle between the common bile duct and the cystic duct. However, it may be injected subperitoneally at almost any point in the field. The solution quickly spreads along the path of least resistance, ie, in the plane of cleavage. In addition, it also produces vasoconstriction lasting about 15 minutes, thus minimizing bleeding. The peritoneum overlying the entire length of the common duct is then excised. It is then peeled off in both directions by means of a Mixter clamp with occasional help from a Metzenbaum scissors. In this way not only is the junction between the common and cystic ducts always clearly demonstrated, but also the cystic artery is quickly and easily identified.

For injection I use a 10 ml three-ring control syringe with a curved hollow needle of the type used in performing tonsillectomy under local anesthesia.

The principle of infiltrating a solution with mild vasoconstrictive property in the plane of cleavage has been used often in other procedures, such as anterior and posterior repair where it permits clear definition of vaginal wall from vesicovaginal fascia and urinary bladder.

I recommend consideration of these two techniques to improve the ease of dissection in gallbladder surgery.

Dr. Lalani, general surgeon, 211 Northwest 1st St, Andrews, Texas 79714.

Quiz: Alcoholism

Gilbert E. Corrigan, MD, PhD

What is alcoholism?

A chronic and usually progressive disease, or a symptom of an underlying psychological or physical disorder, characterized by dependence on alcohol (manifested by loss of control over drinking) for relief from psychological or physical distress or for gratification from alcohol intoxication itself, and by a consumption of alcoholic beverages sufficiently great and consistent to cause physical, mental, social, or economic disability.

Why is it a medical disease?

Because physicians must treat the acute intoxication stage of this disease. Because it is related to many other medical problems—directly, indirectly, and contemporaneously.

Why should it be diagnosed by physicians?

Beyond the reasons of scientific accuracy and recognition, it is necessary to diagnose alcoholism so that modern methods of medical and social treatment can be applied by both the physicians and the responsible community organizations at as early a stage in the disease as is possible. Alcoholism is a reversible disease.

Who is an alcoholic?

An alcoholic is one who is unable to consistently choose whether he shall drink or not, and who, if he does drink, is unable consistently to choose whether he shall stop or not. There is *loss of control* and there is the buildup of a *tolerance*. Many of those admitted to alcohol treatment centers are taking in more than 200 gm of alcohol per day; more commonly one finds figures like 80 to 100 gm per day.

How does one become an alcoholic?

Some claim an idiosyncratic reaction to alcohol with their first drink. For most, becoming an alcoholic is simply a relationship of time and dose (time X dose).

What is a visible alcoholic?

Visible alcoholics are the 5% of alcoholics who generally, through the loss of tolerance, exhibit the physical manifestations of the disease with associated behavioral characteristics.

What is tolerance?

This is the ability of someone to withstand the effects of alcohol and show no loss of function or manifest signs of intoxication. Some alcoholics, during their active period, can come to work having a blood alcoholic concentration of 0.15 to 0.2% without discernible evidence of intoxication (to the unknowing).

What is loss of control?

This is when you can't stop from drinking and can't stop when you are drinking. This is a good diagnostic symptom for alcoholism.

What is a blackout?

This is a period of amnesia for events during or after drinking, but not associated with loss of consciousness. This is another good diagnostic symptom.

What are the initial physical signs of alcoholism?

Red nose and face, facial edema, parotid gland enlargement, spider nevi, liver enlargement, palmar erythema, conjunctival injection with physiological changes of slurred speech and tremor.

What is the abstinence, or withdrawal, syndrome?

After withdrawal (more than six or eight hours), tremulousness, hallucinosis, seizures, and delirium develop.

What are delirium tremens?

The most serious manifestations of the withdrawal syndrome which can occur during active intoxication: tremor, profound confusion, delusions, vivid hallu-

cinations, etc, with autonomic changes: fever, perspiration, tachycardia, tachypnea, etc.

The mortality rate is 15%.

Can high risk towards alcoholism be identified?

Yes, those with a positive family history of alcoholism or teetotalism, socially discordant family situations, heavy smoking, cultural deprivation, and last place in a sibship are at high risk.

How do you stop self-destruction from alcohol?

In the very early stages there is a place for rules, regulations, threats, and moral persuasion. The later stages do not respond to the threat of loss of health and require "deeper" therapy. Alcoholism is curable, especially when treated in its early stages.

Reference

1. Keller M, McCormick M: A Dictionary of Words about Alcohol. New Brunswick, NJ, Rutgers Center of Alcohol Studies, 1968.

Dr. Corrigan, assistant professor of pathology, The University of Texas Medical Branch, Galveston, Texas 77550.

To the Netherlands and back again: a fair exchange

He commented on the warmer climate and the noticeably numerous telephone poles dotting the sprawling countryside, but found Texas doctors to be very much the same as in his home country of the Netherlands. Above all, Professor Dr. G. M. Bleeker said he enjoyed the great hospitality of Texans.

The director of the Netherlands Ophthalmic Research Institute in Amsterdam was invited to the recent Annual Session in Houston as a guest of the Texas Medical Association and the Texas Ophthalmological Association. He was the only participant in the meeting to have come from another continent. Following Annual Session, Dr. Bleeker hosted a group of Texas ophthalmologists during their visit to the Netherlands on their way to the World Eye Congress held in Paris in late May.

In addition to his scientific presentations before the Section on Ophthalmology and the Texas Ophthalmological Association during the Houston meeting, Dr. Bleeker was interested in observing American research methods and facilities which he viewed as exceptional by all standards. Prior to his arrival in Texas he met with authorities in ophthalmology in Boston and New York.

Inter-university study

The research institute in Amsterdam, which Dr. Bleeker heads, is an inter-university facility serving five universities. At the present time, the institute is located in a small building which is part of the University of Amsterdam, but plans call for its own facility within several years. The institute received its first grant from the government last autumn after negotiations with the universities were finalized by Dr. Bleeker. He is currently in the process of seeking research workers, hoping to increase the initial staff of 24 members to 75 ultimately.

In addition to his work with the research institute and his private practice, Dr. Bleeker is a specialist's specialist, so to speak, having cases referred to him by ophthalmologists all over Europe. He is particularly involved with work in the area of orbital disorders.

Dr. Bleeker was very impressed with the high standard of scientific work done in this country and the amount of money donated to research purposes from private enterprise in the United States. He explained that Netherlanders are heavily taxed and that the charity factor is small.

Dr G. M. Bleeker of Amsterdam enjoyed his stay in Texas, thanks to the warm hospitality of physicians he met.

Editor's note: This article is based on recent interviews with Dr. G. M. Bleeker of the Netherlands and Dr. John C. Kuppinger of Harlingen. Each served as the other's host during reciprocal visits to their two countries. The tour for members of the Texas Ophthalmological Association was organized by a committee headed by Dr. Kuppinger and Dr. David Wright of Corpus Christi.

Dr. Bleeker spoke on orbital fractures before the Section on Ophthalmology and the Texas Ophthalmological Association during the Houston Annual Session.

Dutch medicine

During his Houston stay, Dr. Bleeker briefly mentioned a few facets of medicine in the Netherlands, some sounding familiar to American ears.

He said that the distribution of doctors in the Netherlands is fairly good, and that there are incentives for doctors going to remote areas such as the islands. Incentives include extra pay, a free house, and others.

Just recently also, the physicians have begun to form group practices over the solo practices which have been dominant for many years.

Dr. Bleeker briefly described the two types of medical care delivery systems in the constitutional monarchy. Both are based on family income. Two-thirds of the population are covered by compulsory government insurance. The cost is approximately 4% of a worker's salary with the employer and employee each paying half. These persons register their families with practitioners who are responsible for their health care needs. The other third of the population, representing the upper income levels, are free to choose their own physician under a fee-for-service system such as in the United States. Physicians have both kinds of patients. Under the compulsory government insurance, the general practitioner is paid a fixed fee per patient per year regardless of services rendered. Specialists are compensated per case. The country also has liberal assistance programs for those out of work or unable to work.

The national medical organization is not concerned with politics. It is common for doctors to talk to their friends in government, according to Dr. Bleeker, but there

Above is a typical canal scene in Amsterdam.

is no organized lobby to promote specific issues.

Akin to the sea

Like many of his fellow countrymen, Dr. Bleeker's personal life is closely related to the sea and sailing. Because of this he particularly enjoyed the Texas sun and surf during visits to Harlingen and Padre Island. This closeness to the sea is linked to an avid interest in ancient boats. For many years, shallow drafted iron scows sailed on the Zuider Zee off the inland coast of Holland. Today, replaced by modern vessels, many of the scows have been converted into pleasure crafts. Dr. Bleeker owns such a scow dating back 60 or 70 years which he enjoys sailing in the warmer months of the maritime climate.
It was such personal insights on Dutch living as well as observations of the Dutch medical community that awaited the group of Texans accompanying Dr. Bleeker as he returned home from the Houston meeting.

Texans arrive on Dutch soil

Arriving at Schipol airport outside Amsterdam, the Texas ophthalmologists and their families eagerly looked forward to the events of the coming days.
An initial orientation tour of Amsterdam whetted their appetites for international sightseeing with views of the diamond market, floating flower market, and wooden shoe factory.
One of the most beautiful areas toured by the group of 31, described by Dr. John C. Kuppinger of Harlingen, was the Keukenhof.
Covering 40 to 50 acres of government property, the Keukenhof is an annual joint project of all Holland bulb producers.
Each producer is allotted a certain section for the display of his gardening genius. The result is a horticultural spectacular of endless flowers, colors, wooded trails, and duck ponds, a blending of nature's beauty and man's sensitivity. The Keukenhof is open for two months each spring and is as popular with the Dutch as with the tourists.

A traditional image of the Netherlands would be incomplete without a windmill and a field of tulips.

Medical excursions for the group in Holland included a trip to Rotterdam to view the facilities at Oogziekenhuis (eye hospital). In Amsterdam, the group visited the state operated Free Hospital and its department of ophthalmology. The Texans also toured the department of ophthalmology which Dr. Bleeker heads in Wilhelmina Gasthuis medical complex and three of the universities with which he is affiliated.

Before departing from the Netherlands, Dr. Bleeker hosted a cocktail party in honor of the Texans in his home which overlooks a canal. Here, the physicians of both nations had the opportunity to meet on a social basis and get a feeling for life in each country.

Dr. Kuppinger was equally impressed with the expertise and the hospitality of the Dutch physicians. The language barrier was nonexistent as the Dutch physicians were bilingual and possessed a proficiency enabling them to discuss intricate medical procedures as well as the nuances of supplies and cost. A sample of the thoughtfulness of the people, Dr. Kuppinger related, was the presentation from his host of a set of souvenir spoons from Harlingen, Netherlands to himself and his wife.

With a fond farewell to the tulip gardens five days after their arrival, the Texans left Holland and headed for Bruges, Belgium. They spent several hours exploring this ancient merchant town built on the canals leading to the North Sea. Marking the village were the old guild halls, tall narrow buildings lining narrow streets, each displaying the flag of a particular trade.

On to England

From Bruges, the group traveled to Ghent, Belgium where they spent a night before ferrying to England.

Reading the signs more readily, the Texans enjoyed the British sights and the international cuisine available in London. Dr. Kuppinger said that contrary to popular opinion, England offers a variety of excellent dining experiences.

During their stay, the group viewed the garden of England in Kent and attended the Chelsea flower show (on the grounds of Chelsea Hospital on the banks of the

Thames) on the first public viewing day. The Texans felt right at home when they saw that one of the displays in the show featured cacti from Matamoros.
Dr. Kuppinger confirmed reports that the British are great flower lovers and that most homes have very carefully tended gardens.

A view of British medicine

The medically related activities afforded the Texans in England were regarded by all as a highlight of the trip. The group visited Moorfields Eye Hospital, considered the "cradle of ophthalmology," hosted by Dean Alex Cross, a world renowned ophthalmologist. The group also toured the Institute of Ophthalmology which is involved in pure research.
In addition, the Texans toured one of the newest hospitals in England, Charing Cross, where they were quite fortunate to have the opportunity to observe Dr. E. J. Arnott of London and Dr. Charles Kelman of New York perform surgery. Dr. Kuppinger explained that Dr. Arnott had a "Harley Street address" which, translated into British colloquialism, means he is a super-specialist. Dr. Kelman is known for his invention of the phakoemulsifier, used in emulsifying and aspirating a cataract by means of a high frequency (ultrasonic) needle.
Before departing London, the Americans were given a taste of British hospitality at a party given in Dr. Arnott's home near Hyde Park.
Dr. Kuppinger added the observation that the British government banned the use of soft coal some time ago and has been making a concerted effort to clean up the city. So the famed London fog, now a term of yesteryear, has given way to clear days of sunshine.

From England, the group went on to their final destination, the World Eye Congress in Paris. Approximately 8,000 ophthalmologists gathered in the city's new Congressional Hall just west of the Arc de Triomphe for five days of meetings.
Finally, it was back to Texas with a heart full of memories, a suitcase full of souvenirs, and thoughts roving to the next World Eye Congress in four years.

MEDICINE AND THE LAW

The Supreme Court of Texas upheld summary judgment for the physician in a malpractice case in which a physician pleaded statute of limitations and plaintiffs did not come forward with proof raising the issue of fact with respect to fraudulent concealment.

FACTS: The plaintiffs (husband and wife) alleged that in 1966 the defendant doctor performed an operation on the wife for the purpose of repairing a hiatus hernia and that during the course of the operation the doctor intentionally and negligently severed her vagus nerve, which controls many of the functions of the stomach. It was alleged that during this operation the defendant was guilty of malpractice and that he committed several acts of negligence which proximately caused the damage to her. The suit was filed on Aug 5, 1970. The defendant pleaded that the plaintiffs' cause was barred by the two years statute of limitations. By supplemental petition the plaintiffs then pleaded, in an effort to get around the statute of limitations, that they did not give defendant consent to sever any part of Mrs. Nichols' vagus nerve, and that they learned for the first time in 1969 the extent of what the defendant had done during the operation. The plaintiffs then alleged that because of defendant's fraud in concealing from plaintiffs what he had done during the operation and because of their inability to discover what had occurred during the operation until a time within two years prior to the filing of the suit, the suit was not barred by the two year statute of limitations. The plaintiffs further contended that the case came within the doctrine of fraudulent concealment. After depositions were taken the defendant filed a motion for summary judgment on the ground that the plaintiffs' action was barred by the statute of limitations. At a hearing on the motion, the trial court granted summary judgment in the doctor's favor. This case was affirmed by the Court of Civil Appeals.[1] The case was subsequently appealed to the Supreme Court of Texas which affirmed the judgment.[2]

HOLDING: Where the patient sues the physician for malpractice and a suit is brought more than two years from the time of the alleged negligent act, the statute of limitations will bar suit. This is true in Texas with the exceptions of foreign objects sewed up inside a person's body and cases arising from vasectomy operations, where no fraudulent concealment upon the part of the physician is proven.

COURT REASONING: In Texas the general rule is that a cause of action for medical malpractice arises at the time the negligent act causing injury, however slight, to the plaintiff's person is committed.[3] In recent years the Supreme Court of Texas has created two exceptions to this general rule as mentioned above. In a case involving a foreign object left inside a person's body during an operation, limitations do not begin to run until the plaintiff discovers the presence of the foreign object in his body, or until such time that the plaintiff, by the exercise of ordinary care and diligence, should have discovered the presence of such foreign object.[4]

In regard to the other exception, arising from vasectomy operations, the Supreme Court of Texas has held that the limitations start to run on the date of the discovery of the true facts concerning the failure of the operation, or from the date it should have been discovered in the exercise of ordinary care and diligence.[5]

The two year statute of limitations, (Article 5526, V.A.T.S.), is the limitations statute

that applies to medical malpractice cases.[6]

In the case in question, when the plaintiffs asked the court to apply the rule of fraudulent concealment, the court stated that the rule is as follows:

> When a party against whom a cause of action exists in favor of another, by fraud or concealment prevents such other from obtaining knowledge thereof, the statute of limitations will commence to run only from the time the cause of action is discovered or might have been discovered by the exercise of diligence.[7]

The application of the rule of fraudulent concealment is not intended to apply to cases that are founded upon fraud. The court stated that fraudulent concealment does not create a new or a separate cause of action in and of itself. In instances in which the doctrine applies, its only effect is to estop the guilty party from relying upon limitations as a defense until the time the plaintiff either discovers the fraud, or could have discovered it by the exercise of ordinary diligence.[8] The court stated that the fraudulent concealment relied upon by the plaintiff was pleaded to avoid the statute of limitations. In addition, in order for the doctrine of fraudulent concealment to apply, it must be shown that the defendant had knowledge of the facts claimed to have been fraudulently concealed by him.

The court pointed out that the summary judgment proof consisted of depositions and affidavits of the plaintiffs and the defendant doctor. The doctor's deposition stated that the nerve was severed because the hernia could not properly be repaired without doing so and that the patient had been told of such and admitted being so advised. In view of the undisputed evidence which showed that the suit was not filed until four years after the operation, the court said the defendant doctor was entitled to the summary judgment unless the patient came forward with evidence showing a prima facie case of fraudulent concealment which she failed to do.

The court stated that the pleading of an affirmative defense by a plaintiff will not, in itself, defeat a motion for summary judgment where proof conclusively establishes a right to an instructed verdict. The court stated if the plaintiff wished to prevent the granting of a summary judgment against her, she had the burden of coming forward with proof raising an issue of fact with respect to fraudulent concealment. Since they failed to do so, the allegation of fraudulent concealment does not defeat the respondent's right to a summary judgment.

The court pointed out that it could be argued that the case is governed by the discovery rule as applied in *Gaddis v. Smith* and *Hays v. Hall*. The court said the judgment of the trial court cannot be reversed on that ground, however, because the plaintiffs confined their points of error and argument in the Court of Civil Appeals to the contention that the allegations of fraudulent concealment precluded a summary judgment in the respondent's favor. The court further gave the caveat, "Our action in affirming the action of the trial court is not to be understood, therefore, as holding that the discovery rule has no application here."

CONCLUSION: In order to achieve reasonable fairness to all parties involved in a legal dispute, all jurisdictions adhere to rules called statute of limitations. Statute of limitations bar a suit if not brought within a specific time after the incident occurs. In Texas the statute of limitations on a medical malpractice suit is two years from the time the negligent act causing injury,

however slight, to the patient is committed. In some states the limitation time begins to run from the time the patient knew or should have known that the negligence may have been committed. This is known as the "discovery rule." The Texas courts have only extended the "discovery rule" to two types of cases: 1) those concerning foreign objects left in the patient's body and 2) cases arising from vasectomy operations.

Texas courts recognize the doctrine of fraudulent concealment which will cause the statute of limitations to commence not from date of act but from the discovery.

This case does provide some relief to the defendant doctor in that a motion for summary judgment (holding by judge that as a matter of law a party is entitled to the relief requested), where two years has passed since the alleged act of malpractice, will not be defeated unless the patient comes forward with proof at that time of the alleged fraudulent concealment.

TMA Office of General Counsel
Ace Pickens

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1. *Nichols v. Smith,* 489, S.W. 2d 719 (Tex. Civ. App. 1973)
2. *Nichols v. Smith,* 507 S.W. 2d 518 (Tex. Sup. 1974)
3. *Stone v. Morris,* 476 S.W. 2d 901 (Tex. Civ. App. 1972)
4. *Gaddis v. Smith,* 417 S.W. 2d 577 (Tex. Sup. 1967)
5. *Hays v. Hall,* 488 S.W. 2d 412 (Tex. Sup. 1972)
6. *Steward v. Janes,* 393 S.W. 2d 428 (Tex. Civ. App. 1965, writ. ref., 383 U.S. 962, 86 S. Ct. 1233, 16 L. Ed. 2d 304; 384 U.S. 923, 86 S. Ct. 1372, 16 L. Ed. 2d 444)
7. 37 C.J. 971, Limitations of Actions, Sec. 351
8. *Thompson v. Barnard,* 142 S.W. 2d 238 aff. 138 Tex. 277, 158 S.W. 2d 486

Medical Newsmakers

The first Texan in 20 years to hold office on the national board of the American Society of Colon and Rectal Surgeons is DR. JOHN McGIVNEY of Galveston. He was elected vice president of the organization during the annual convention conducted recently in Washington, DC.

Two new appointments to the Texas Rehabilitation Commission's Medical Advisory Committee are DR. JOHN C LONG, JR of Plainview and DR SIDNEY E STOUT of Fort Worth. The surgeon and the internist, respectively, were named to the three year posts as of July 1. Recent reappointments to the Committee included DR. O SHERMAN CARLSON, Corpus Christi, DR. ALBERT JOHNSON (DDS), Austin, and DR. JERRY MILLER, Dallas.

JAMES R HICKOX has been named executive secretary of the Harris County Medical Society. Active in medical association activities for over 15 years, Hickox has been with HCMS since 1969.

An AMA award has been presented to a Texas high school student at the National Science Fair. GARY MONROE FUCHS of Cameron, whose project was "Factors Affecting the Development of Atherosclerosis," was selected for the award at the 25th International Science and Engineering Fair in South Bend, Ind, earlier this year. He exhibited his work at the TMA Annual Session in Houston in May and the AMA Annual Convention in Chicago in June.

The Tarrant County Medical Society has appointed DR. JAMES W SHORT as fulltime executive officer, effective July 1. Dr.

Dr. Short

Short's duties will include assisting the president of the society, attending all major committee meetings, and providing continuity for the many ongoing programs of the organization. Dr. Short will edit the monthly *TCMS Bulletin* and *Newsletter* among many other functions.

DR. P O'B MONTGOMERY has been nominated by President Nixon for appointment to the Board of Regents of the new Uniformed Services University of the Health Sciences in Bethesda, Md. The Dallas medical scientist is a professor of pathology at The University of Texas Southwestern Medical School at Dallas. He served as a chief investigator on a recent Skylab experiment to determine effects of weightlessness on human lung cells. The nomination will go to the Senate for approval.

Effective June 1 DR. JAMES W WAGENER assumed the position of assistant to the president of The University of Texas Health Science Center at San Antonio. Dr. Wagener concurrently serves as associate professor of educational studies at the center. He previously served as staff academic officer for the UT System in Austin.

Third and fourth year students at The University of Texas Medical School at San Antonio selected DR. ARTHUR McFEE as outstanding clinical instructor. The award goes annually to the clinical professor "who demontrates the greatest interest in teaching and in students." The associate professor of general surgery joined the faculty in 1967.

DR. CHARLES W DAESCHNER, professor and chairman of the department of pediatrics at The University of Texas Medical Branch at Galveston, has been awarded the Katherine and Nicholas C. Leone Award for Outstanding Administrative Ability at the annual Honors and Awards Ceremony in June. The award honors those individuals at the Medical Branch who have attained a level of professional achievement which warrants recognition. Only those from the departmental chairman level or above in the professional group, or corresponding levels in the non-medical administrative category are eligible. Dr. Daeschner, a member of the TMA Scientific Publication Committee, has served as head of the pediatrics department since 1960.

DR. LEX T NEILL has been awarded the 1974 Commissioner's Award, the highest citation given by the Texas Department of Mental Health and Mental Retardation. Dr. Neill joined the staff of Rusk State Hospital in 1962, serving as staff physician until he was appointed superintendent in 1970.

DR. GLADYS J FASHENA, professor of pediatrics at The University of Texas Southwestern Medical School, has been selected as one of ten outstanding college teachers in the state to be designated a "Piper Professor of 1974." Dr. Fashena was among 150 educators nominated for the honor throughout Texas. The awardees were chosen by the board of directors of the Minnie Stevens Piper Foundation of San Antonio, which sponsors a variety of programs aiding education.

The chief of the Transplant Immunology Division of the Shriners Burns Institute in Galveston, DR. NICK S HARRIS, has been awarded a three year grant, totaling $138,000, from the National Cancer Institute for investigating methods to control antibody production in the body's immune system when protecting itself against cancer.

Medicine in literature

Clinical Pediatric Oncology, Wataru W Sutow, Teresa J Vietti, Donald J Fernbach, 602 pp, 216 illus, St Louis, C V Mosby Co, 1973, $35.50.

This text will prove to be of value in the diagnosis and treatment of all pediatric oncology problems that arise. The contributing authors have done an excellent job in each subject discussed. The text not only covers the diagnostic aspects of these conditions but also contains discussions regarding treatment particularly for acute leukemia, Hodgkin's disease, and Wilms' tumors which are the most common problems we have seen in our pediatric practice over the past years.
As far as I can determine, there have been no deletions of any pertinent topics and I feel that this text will be a continuous and valuable asset as a reference to any practicing pediatrician's library.

L B OUTLAR, MD
Wharton

A Handbook of Ocular Therapeutics and Pharmacology, Ed 4, Phillip E Ellis and Donn L Smith, St Louis, C V Mosby Co, 262 pp, 1973, $14.75.

This book presents an interesting, readily usable format and size. It is divided into a section on ocular therapeutics where basic principles are described in a clear, concise way. This section also covers therapeutics on an anatomical basis.
The second section is on pharmacology and serves as a quick reference on dosage, side effects, etc. It contains needed clinical information in a way that is quickly available including useful tables and pediatric dosages. The index is excellent. While the information may at times seem abbreviated, it fills the need for an up-to-date reference for most needs of the ophthalmologist.

JAMES L MIMS, JR, MD
San Antonio

IN THE TMA LIBRARY

Blau Sheldon Paul, Schultz Dodi: *Arthritis—Complete Up-to-Date Facts for Patients and Their Families,* New York, Doubleday, 1974

Butler ST, Raymond Robert: *Frontiers of Science 1: Introduction to Physics,* New York, Anchor Press/Doubleday, 1974

Butler ST, Raymond Robert: *Frontiers of Science 2: Introduction to Modern Medicine,* New York, Anchor Press/Doubleday, 1974

Collen Morris F (ed): *Technology and Health Care Systems in the 1980's,* Bethesda, US Department of Health, Education, and Welfare, 1973

Wright Irving S, Fredrickson Donald T (eds): *Cardiovascular Diseases Guidelines for Prevention and Care,* Washington, DC, 1973

Kienie Franz AN: *Das Elektrische Herzportrait,* Karlsruhe, Helmut Schneider, 1973

McGovern John P, Burns Chester R (eds): *Humanism in Medicine,* Springfield, CC Thomas, 1973

Read Leonard E: *Who's Listening?,* New York, The Foundation for Economic Education, Inc, 1973

Walker H Kenneth, Hurst J Willis, Woody Mary F (eds): *Applying the Problem-Oriented System,* New York, Medcom Press, 1973

RECENTLY
DECEASED MEMBERS
OF THE
TEXAS MEDICAL
ASSOCIATION

J F Hooker, III
Fort Worth, 1923-1974

C P McKenzie
Mexia, 1894-1973

T E Marshall
Gilmer, 1902-1974

R B Leonard
Terrell, 1910-1973

J H Grammer
Fort Worth, 1907-1974

W W Harris
Austin, 1911-1974

M G Russell, Jr
Dallas, 1922-1974

R A Lemee
Vernon, 1909-1974

R O Swearingen
Carlsbad, 1915-1974

D K Wilson
Seguin, 1928-1974

J J Ruiz
Houston, 1903-1974

A E Hubner
Beaumont, 1917-1974

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

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Recent deaths

Dr. J F Hooker, III

Dr. James Finis Hooker, III, died Feb 21, 1974, of a heart attack. The 50-year-old pediatrician had practiced in Fort Worth for 19 years.

Dr. Hooker was graduated from The University of Texas Medical Branch at Galveston and took an externship at St Mary's Hospital, Galveston. In 1948, he moved to Baltimore where he completed an internship and residency in pediatrics at Baltimore City Hospitals. He returned to Fort Worth in 1951 and practiced for a year prior to serving as a captain in the US Army during the Korean Conflict. Following discharge from the service, he practiced for a short time in Cleburne and then moved back to Fort Worth where he remained until his death.

The physician was a member of Tarrant County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by one sister, Mrs. Betsy Guthrie; a niece, Mrs. Stanley M Franklin; both of Vienna, Va; and a newphew, W C Guthrie, III, Falls Church, Va.

Dr. C P McKenzie

Dr. Casimir Perier McKenzie of Mexia died Nov 30, 1973. He had been a family physician in Mexia for over 50 years.

Born in 1894, in Mexia, Dr. McKenzie attended The University of Texas at Austin. He was graduated with a BA degree from Rice University, Houston, and received an MD degree from The University of Texas Medical Branch at Galveston in 1920. Following an internship at San Francisco General Hospital, San Francisco, Calif, he returned to Mexia where he practiced medicine until his death.

Dr. McKenzie was a member of Texas Medical Association and American Medical Association, and had served as president of Limestone County Medical Society.

He is survived by his daughter, Mrs. Teresa Smyth, Houston; and two sisters, Mrs. Mary Eleanor White, and Mrs. Pauline Neece, both of Mexia.

Dr. T E Marshall

Dr. Thomas Edward Marshall died Mar 6, 1974. He had been the acting director of Upshur County Health Unit since 1965.

Born in 1902, Dr. Marshall was graduated from Baylor College of Medicine, then located in Dallas, in 1928. He completed an internship and residency at Baylor Medical Center, Dallas, and practiced medicine in Dallas until 1935, when he moved to Gilmer. In 1948, he moved to Shreveport, La, where he was associated with the Veterans Administration Center until 1965. At that time he returned to Gilmer where he remained until his death.

Dr. Marshall was a member of Shreveport Medical Society, Louisiana State Medical Association, Upshur County Medical Society, Texas Medical Association, Southern Medical Association, and American Medical Association.

He is survived by his wife, Nell Norris Marshall, Gilmer; son, T E Marshall, Jr, Londonderry, NH; daughter, Mrs. Ruth Parker, Austin; and three sisters.

Dr. R B Leonard

Dr. Robert Bruce Leonard died Dec 4, 1973. The 63-year-old physician had practiced in Terrell since 1964.

A 1947 graduate of Baylor College of Medicine, Houston, Dr. Leonard completed an internship at Methodist Hospital, Houston, prior to entering private practice. In 1964, he moved to Terrell where he was associated with the Terrell State Hopital, and remained there until his death.

He was a member of North American Association of Alcoholism Programs, Kaufman County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Fredleen Power Leonard, Terrell; two daughters, Mrs. G R Singleton and Mrs. W J Hyson, both of Fort Worth; two sons, Robert F Leonard and Theodore W Leonard, both of Terrell; one sister; one brother; and three grandchildren.

Dr. Hooker

Dr. McKenzie

Dr. Marshall

Dr. Leonard

Dr. Russell

Dr. J H Grammer

James Henry Grammer, Fort Worth physician, died Mar 1, 1974, in a Fort Worth hospital. Cause of death was acute congestive heart failure.

Dr. Grammer was graduated from Texas A & M University and received his MD degree from The University of Texas Medical Branch at Galveston in 1932. After an internship at Kansas City General Hospital, he practiced medicine in Fort Worth for a short while before serving as a flight surgeon in the Pacific area during World War II. Following his war service, Dr. Grammer returned to Fort Worth where he continued the practice of family medicine until his death.

He was a member of Tarrant County Medical Society, Texas Medical Association, and American Medical Association.

Dr. Grammer is survived by his wife, Judy Harvin Grammer, Fort Worth; two stepdaughters, Mrs. Carl Schutz, Galveston, and Mrs. Lee Lydick, Fort Worth; one stepson, Glen D Woodson, Jr, Fort Worth; sister, Mrs. Margaret Stinson; brother, Dr. Richard B Grammer, both of Fort Worth; and eight grandchildren.

Dr. W W Harris

Austin family physician since 1946, Dr. Woodson Weldon Harris died Apr 30, 1974, at the age of 62 years.

Dr. Harris received a BA degree from The University of Texas at Austin and an MD degree from The University of Texas Medical Branch at Galveston. He served an internship at The Methodist Hospital, Houston, and began the private practice of medicine in Houston. His practice was interrupted by service in the US Air Force from 1942 to 1946. After discharge, Dr. Harris moved to Austin where he remained until his death.

He was a member of American Academy of Family Physicians, Travis County Medical Society, Texas Medical Association, and American Medical Association.

The phyician is survived by his wife, Ann Wegner Harris, Austin; three sons, John Weldon Harris, Austin, Darrow Dean Harris and Robert Brent Harris, both of Dallas; and one grandson.

Dr. M G Russell, Jr

Melvin Gray Russell, Jr, Dallas physician and associate professor of pediatrics at The University of Texas Southwestern Medical School, died Mar 31, 1974, at the age of 51.

Dr. Russell received a BA degree from The University of Texas at Austin and an MD degree from The University of Texas Southwestern Medical School at Dallas. He completed an internship at Parkland Memorial Hospital, Dallas, and a residency at Children's Medical Center, Dallas. He began the private practice of medicine in Dallas in 1954, and remained there until his death. Dr. Russell served as a lieutenant jg in the US Navy during World War II.

He was a member of Dallas County Medical Society, Texas Medical Association, American Medical Association, American Academy of Pediatrics, Texas Pediatric Society, Dallas Pediatric Society, and was certified by the American Board of Pediatrics. At the time of his death, Dr. Russell was president-elect of the Texas Pediatric Society.

Surviving the physician are his wife, Elizabeth Kemp Russell; two sons, Thomas Kemp Russell and Melvin David Russell; parents, Mr. and Mrs. M G (Bud) Russell; all of Dallas, and two brothers.

Dr. R A Lemee

Raymond Adoulph Lemee, 64, died Apr 21, 1974. He had been a family physician in Vernon since 1946.

A native of Louisiana, Dr. Lemee did premedical studies at Southern Methodist University, Dallas, and was graduated with an MD degree from Baylor College of Medicine, then located in Dallas. He completed an internship at Parkland Memorial Hospital, Dallas, and served as camp surgeon for the CCC at Denton. He also served as a lieutenant colonel in the US Army from 1940 to 1946, and upon discharge, established his medical practice in Vernon.

Dr. Lemee was a member of American Academy of Family Physicians, Texas Medical Association, and American Medical Association. He had served as both secretary and president of Wilbarger County Medical Society.

He is survived by his wife, Edith McGaugh Lemee, Vernon; two daughters, Mrs. Patricia Smith, Gilmer, and Miss Ann Lemee, Houston; brother, James Lemee, Shreveport; sister, Mrs. R O Cardwell, Dallas; and one grandchild.

Dr. R O Swearingen

Dr. Revace O (Sam) Swearingen, medical director of San Angelo Center at Carlsbad, Tex, died Mar 10, 1974. Cardiac-arrest caused the death of the 58-year-old physician.

Dr. Swearingen was graduated from The University of Texas at Austin with a BS degree. He received his MD degree from The University of Texas Medical Branch at Galveston and interned at Gallinger Municipal Hospital, Washington, DC. Following a surgical residency at Brackenridge Hospital, Austin, Dr. Swearingen served as a Captain in the US Army during World War II. Upon release from the service, he returned to Austin where he practiced until 1967, when he moved to Denton. In 1971, he assumed the position of Medical Director of San Angelo State Center in Carlsbad where he remained until his death.

Medical memberships included Tom Green Eight County Medical Society, Texas Medical Association, American Medical Association, and American College of Surgeons.

He is survived by his wife, Margaret Ann Galceran Swearingen, Carlsbad; daughter, Mrs. B Brent (Cissy) Livingston, Lubbock; two sons, Revace Lee Swearingen, Victoria, and John Winston Swearingen, Austin; and one brother, Merwin A. Swearingen, Corrigan.

Dr. Lemee

Dr. Swearingen

Dr. D K Wilson

Donald Kenneth Wilson, Seguin family physician, died Apr 18, 1974, at the age of 45. Cause of death was a heart attack.

Dr. Wilson received a BS degree from Baylor University, Waco, and earned an MD degree from Baylor College of Medicine, Houston. He interned at Baptist Memorial Hospital, San Antonio, and completed a residency at Robert B Green Memorial Hospital, San Antonio. In 1957, he began the practice of medicine in Carrizo Springs with his brother, moving in 1963 to Seguin where he remained until his death.

Medical memberships included Guadalupe County Medical Society, Texas Medical Association, and American Medical Association.

Dr. Wilson is survived by his wife, Betty Duran Wilson; two sons, Donald K Wilson, Jr, and John David Wilson; and daughter, Sandra Wilson; all of Seguin.

Dr. Wilson

Dr. Ruiz

Dr. Hubner

Dr. J J Ruiz

John Joseph Ruiz, Houston physician since 1938, died Apr 14, 1974. An aortic aneurysm caused the death of the 70-year-old physician.

A native of Mexico, Dr. Ruiz earned a pharmacy degree from The University of Texas Medical Branch at Galveston, and practiced as a pharmacist for six years before returning to Galveston where he received an MD degree from The University of Texas Medical Branch in 1936. After completion of an internship at The Methodist Hospital, Houston, Dr. Ruiz established a medical practice in that city.

Dr. Ruiz held memberships in Harris County Medical Society, Texas Medical Association, and American Medical Association, as well as American Academy of Family Physicians and Texas Academy of Science.

He is survived by his wife, Luz Stanahan Ruiz, Houston; two sons, John J Ruiz and Dr. Richard S Ruiz, both of Houston; daughter, Mrs. Dolores Morrow, Austin; eight brothers; and three sisters.

Dr. A E Hubner

Alan Ernest Hubner, Beaumont surgeon since 1951, died Mar 15, 1974. Carcinoma caused the death of the 57-year-old physician.

Dr. Hubner was graduated from The University of Texas Medical Branch at Galveston in 1941. He completed an internship at Shreveport Charity Hospital, Shreveport, prior to entering the US Army. Upon release from active duty, Dr. Hubner completed residencies at Ashburn Hospital, McKinney, Tex, and the VA Hospital, Houston, before establishing his medical practice in Beaumont.

Dr. Hubner was a member of Jefferson County Medical Society, Southeast Texas Surgical Society, American College of Surgeons, American Society of Abdominal Surgeons, Texas Medical Association, and American Medical Association. He was certified by American Board of Surgery in 1951.

He is survived by his wife, May Delle Ritchey Hubner, Beaumont; two sons, Alan E Hubner, Jr, St Louis, and Richard Hubner, Galveston; daughter, Miss Carolyn Hubner, Austin; and mother, Mrs. Mattie Mae Hubner, Beaumont.

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Advertising Directory

Abbott	60
Beverly Hills Hospital and Clinic	97
Burroughs Wellcome Company	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
The Diagnostic Clinic of San Antonio, P.A.	34
Dorsey Laboratories	23
El Paso Psychiatric Clinic	22
Flint Laboratories	29
Ives Laboratories, Inc.	27
Mead Johnson Laboratories	11, 38
Kelsey-Seybold Clinic	65
Eli Lilly and Company	40
Loma Linda Foods	29
The Martin X-Ray and Radium Clinic	111
Medical Arts Clinic of Corsicana	98
The Medical Protective Company	22
Medicenter Psychiatric Hospital	34
The Pharmaceutical Manufacturers Association	58-59
The Prudential Insurance Company of America	9
Psychiatric Institute of Fort Worth	24
Radiology Associates of Fort Worth	98
Resaca Vista, Inc., San Benito	21
Roche Laboratories	1-2, 14-15
Roerig	32-33, 77-78
Scott and White Clinic	Back Cover
G. D. Searle & Co.	30-31
Seaview Hospital	56
Starlite Village Hospital	24
Texas Medical Association	
Automobile Leasing Program	39
Conference on Medical Service and Practice Management	108
Memorial Library Fund	92
PSRO Reprint	55
Texas State Board of Medical Examiners	24
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	98
The Upjohn Company	4-5
Wallace Laboratories	56-57
Wichita Falls Clinic-Hospital	111

Physicians' Directory	99-108
Classified Advertisements	109-110

Editorials

OUTPATIENT SURGICAL CENTERS OFFER ECONOMY AND EFFICIENCY

In 1968 Dr. William H. L. Dornette wrote, "A safe and efficient facility for the performance of general anesthesia and minor surgical procedures need not be affiliated either administratively or geographically with a hospital."[1]

This same concept had been expressed earlier; excellent outpatient surgical facilities, under the wing of the hospital, had been established at two university medical centers.

In 1969, ground was broken for the Surgicenter in Phoenix, Ariz, and the first patients were treated in February 1970. This was a landmark in the development of outpatient surgical facilities, and it attracted the attention of surgeons throughout the world. I have been interested in outpatient surgical care for several years. Speaking to the American Association of Medical Clinics in 1970, John Ford, MD, founder of the Phoenix Surgicenter, discussed that free-standing surgical facility which, in the first year of operation, saved its patients about $400,000. There are several fundamental reasons why outpatient surgical facilities should be built and used in the United States:

1. Approximately 25% of the surgery done in general hospitals could be done in an outpatient surgical facility with proper equipment and training of anesthesiologists and surgeons.

2. Patients could save 30 to 50% in costs by receiving treatment as outpatients rather than as inpatients.

3. National health insurance, which we shall have, will be a tremendous drain on hospital facilities. If we can stress ambulatory care and remove from the general hospitals the 20% of patients who could be treated on an ambulatory basis, and the 25% of surgical patients who could be treated in an outpatient surgical facility, then we will have gone a long way toward alleviating the crunch that will come with national health insurance.

I have collected a series of charges on inpatients, and one case is representative of what the patient can save by being treated in an outpatient surgical center. The patient was admitted to the hospital for a complete urological study. She had excretory urograms and urine culture, as well as a chest x-ray and an electrocardiogram. She was in the hospital a total of 72 hours, and her bill was $265. She could have been taken care of in an outpatient surgical center for about $125. Similar examples are easy to find.

We need to realize that several basic things happened in America which rapidly increased the cost of health care delivery. Tremendous strides have been made in technology. Also, it has been assumed generally that the medical profession could do anything that it would, and next that it should do everything it could for all people. This, of course, is an impossible situation—no person or group can do an infinite amount of work in a finite length of time.

Another basic program that brought about our situation was the Hill-Burton Program, which caused overbuilding of hospitals in the United States. The average occupancy in US hospitals today is around 72%. Declining to sign a contract with HEW relating to Section 1112, PL 92-603, Gov Dolph Briscoe stated the occupancy in Texas hospitals in 1973 was 59.8%. That meant that on an average day there were approximately 24,000 unused hospital beds in the state, and at that time the average cost of maintaining a vacant hospital bed was between $50 and $60 a day.

As a result of overbuilding in some areas, more patients had to be hospitalized for care simply to keep the hospitals open. This has been recognized by the federal government, and is reflected in current proposed legislation. The legislative assistants who are writing these bills have assured me that the emphasis will be on

outpatient ambulatory care and outpatient surgical centers.

The total health bill in the United States last year was $94.6 billion, and of that about $70 billion either went to physicians or hospitals, with hospitals receiving about $46 billion. A 20% reduction in that figure could be a substantial saving.

I believe that the time has come when the medical profession must lead the way into better delivery of health care which will be more economical for people of this country. They, in conjunction with the health insurance industry, must see that policies will pay for ambulatory care and ambulatory surgical care, and must emphasize this in order to realize the savings that are possible. I do not believe there will be an increased demand for hospitalization when national health insurance comes into effect.

The idea of outpatient surgical care is not at all new. All of us can remember when tonsillectomies, circumcisions, breast biopsies, etc, were done in the doctor's office. Of course we realize now that this type of surgery should not be done in a doctor's office. Still, we must be careful to select for outpatient surgery only those cases which require more facilities than are available in a doctor's office, and yet can be done without the full range of services and facilities of a general hospital.

I visited the fine facility in Austin, and was aided by Mr. M. K. Hage, Jr., Austin, in developing plans for our outpatient surgical center in Jacksonville. Ours was the second such facility to receive notification from the Texas State Board of Health that it will be licensed as a hospital when it is finished. Blue Cross/Blue Shield of Texas have said that their policies would pay benefits for policyholders treated in our center. Nationally, Blue Cross has gone on record as favoring outpatient surgical centers, as has the Health Insurance Association of America.

It is difficult for hospitals to maintain an outpatient surgical center as part of an inpatient service, since they have to maintain so many other services which the outpatient ends up having to help pay for. The advantage of a free-standing surgical center is that it does not require much of the expensive equipment that is in hospitals, and the savings can be passed on to the patients.

Blue Cross of Texas has recently published its criteria for therapeutic centers. I think the Texas Medical Association should address itself to some of these guidelines, with the view of working cooperatively toward revising some for the betterment of outpatient surgical facilities. For instance, they require that written agreements be maintained with one or more local Blue Cross member hospitals for immediate acceptance of patients should the need arise. I think that no surgeon should be allowed to operate in an outpatient surgical facility unless he is on the staffs of his local hospitals and has complete privileges to admit patients to them at any time. Thus, there would be no necessity for a written agreement between the hospital and the free-standing surgical facility.

These are minor points, but they could be worked out for the betterment of the surgical facility.

Further, I think that the TMA should address itself to the introduction of a bill in the Texas Senate which would offer a different set of criteria for licensing an outpatient surgical facility than that used by the Texas State Department of Health at the present time. Now, the only criterion available to the Texas State Department of Health for licensing such a structure is that it be built in accordance with the regulations for licensing of Texas hospitals. This unnecessarily increases the cost of an outpatient surgical facility, while its whole reason for being is that it can be built for less than a hospital, and render some services just as well, if not better, at less cost.

I have discussed this problem with Sen Don Adams, Jasper, and I believe that if the TMA can come forward with criteria that will allow the Texas State Department of Health to license these facilities, it would have support not only from its members but also from the public at large, which demands and will have better medical care at less cost if at all possible.

Hugh F. Rives, MD, Jacksonville.

Reference

1. Dornette WHL: Planning tomorrow's hospital today. Washington, DC, Amer Assoc Anesthesiologists (Oct) 1968.

A look at the AMA meeting

The AMA annual session in Chicago has concluded, and I feel that several pertinent observations are in order.

First, I must call attention to the tremendous amount of work performed by the Texas delegation. These apparently indefatigable people begin work at early morning breakfast meetings and continue through reference committee sessions, House meetings, hospitality suite duties, and involvement with the necessary but interminable game of politics. The amount of time devoted to advancing the aims and objectives important to TMA leaves little opportunity for personal activities. The men who provide us with effective representation are due much credit for their efforts.

This year Texas' resolutions did not fare as well as they have in past sessions, primarily because of the changing atmosphere in the House of Delegates. A perceptible undercurrent of protest was present, which surfaced in the nomination of Dr. Richard S. Wilbur, Chicago, for president-elect. Also, 11 candidates were nominated for six places on the Board of Trustees. Incumbent Dr. Max H. Parrott, Portland, was elected by a narrow margin, and two other incumbents were defeated. We can take much pride in the election of Dr. Joe Nelson, of Weatherford, to the Board. Also, Dr. Charles Verheyden, currently of Rochester, Minn, won election to the AMA Council on Medical Education as the intern and resident member.

Somewhat difficult to explain and most disappointing to many delegates was the vote of the House on PSRO repeal. In a long session on Monday, members of the reference committee heard 25 resolutions on the subject, including 2 from Texas. On Tuesday afternoon there were impassioned pleas giving opposing viewpoints and with another repeal substitute resolution presented by Dr. Joseph Boyle of California. Debate was suddenly terminated, and the vote to seek amendments instead of repeal was overwhelming. The news media, anticipating a fierce battle, were keenly disappointed at the turn of events.

The AMA will continue to seek legislation allowing peer review, in accordance with the profession's philosophy, to serve the best interests of patients. Also, those states not desiring to participate in PSRO are urged to develop effective alternate programs.

Most of the doctors of Texas are disturbed by the present trend. On July 20 the Executive Board will meet in Austin to consider the course to be followed by the Texas Medical Association.

E W Schmidt, M.D.

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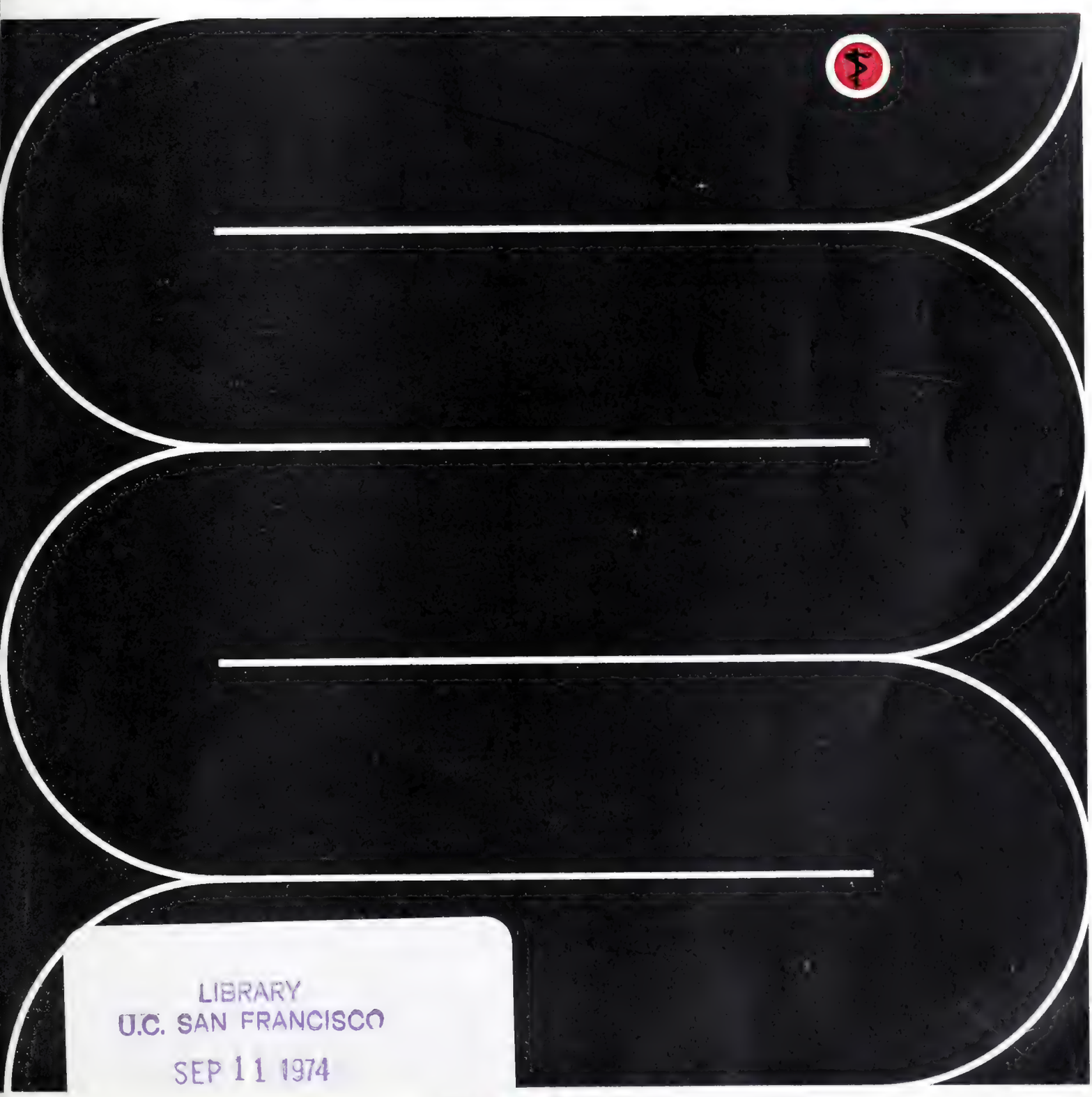

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Contents

SCIENTIFIC ARTICLES

53 Coronary heart disease rehabilitation
Clyde Fagg Sanford III

59 Complete heart block caused by secondary tumors of the heart; Case report and review of the literature
Dr. David B. Redwine

65 Fractures seen in a rural community hospital
Dr. Herbert T. Smith

71 Nephrotic syndrome secondary to intrinsic renal disease
Dr. Gerald A. Beathard

80 Increasing reading efficiency
Dr. Elizabeth A. Smith
Dr. Grant Taylor

84 GRO with continuing education
Dr. Vilma T. Falck
Dr. H. Grant Taylor

EDITORIALS

144 Mirror, mirror on the wall, who needs help the most of all?
Dr. Lee F. Scarborough

148 Professional liability insurance among Executive Board concerns
Dr. E. W. Schmidt

FEATURES

92 Is TMA a scientific group? You bet!

98 South American adventure: un buen viaje
Dr. Albert F. Vickers

104 Something 'big' about small town practice

NEWS

6 TMA fall conference

7 Committee to study malpractice, liability insurance

10 TIMA elects directors

10 Baylor, A&M awarded grant

10 Physicians' assistant guides

11 Newspapers criticize PSRO

11 Tech appoints dean

11 Hardt retires

12 Family nurse practitioners to be trained in Texas

12 Death rate decreases for nine leading causes

13 RMPT names new activities

13 Program in dietetics

14 New influenza vaccine

14 MECO project

14 Basic sciences exam

18 Anti-smoking poster

18 Building contract awarded for med school expansion

18 Exams taken by 626

DEPARTMENTS

21 Capital Comments

27 Information for Authors

33 Coming Meetings

39 Continuing Education

111 Legal Protection: Facts You Should Know

113 Medicine and the Law

116 Medicine in Literature

117 Medical Newsmakers

119 Recent Deaths

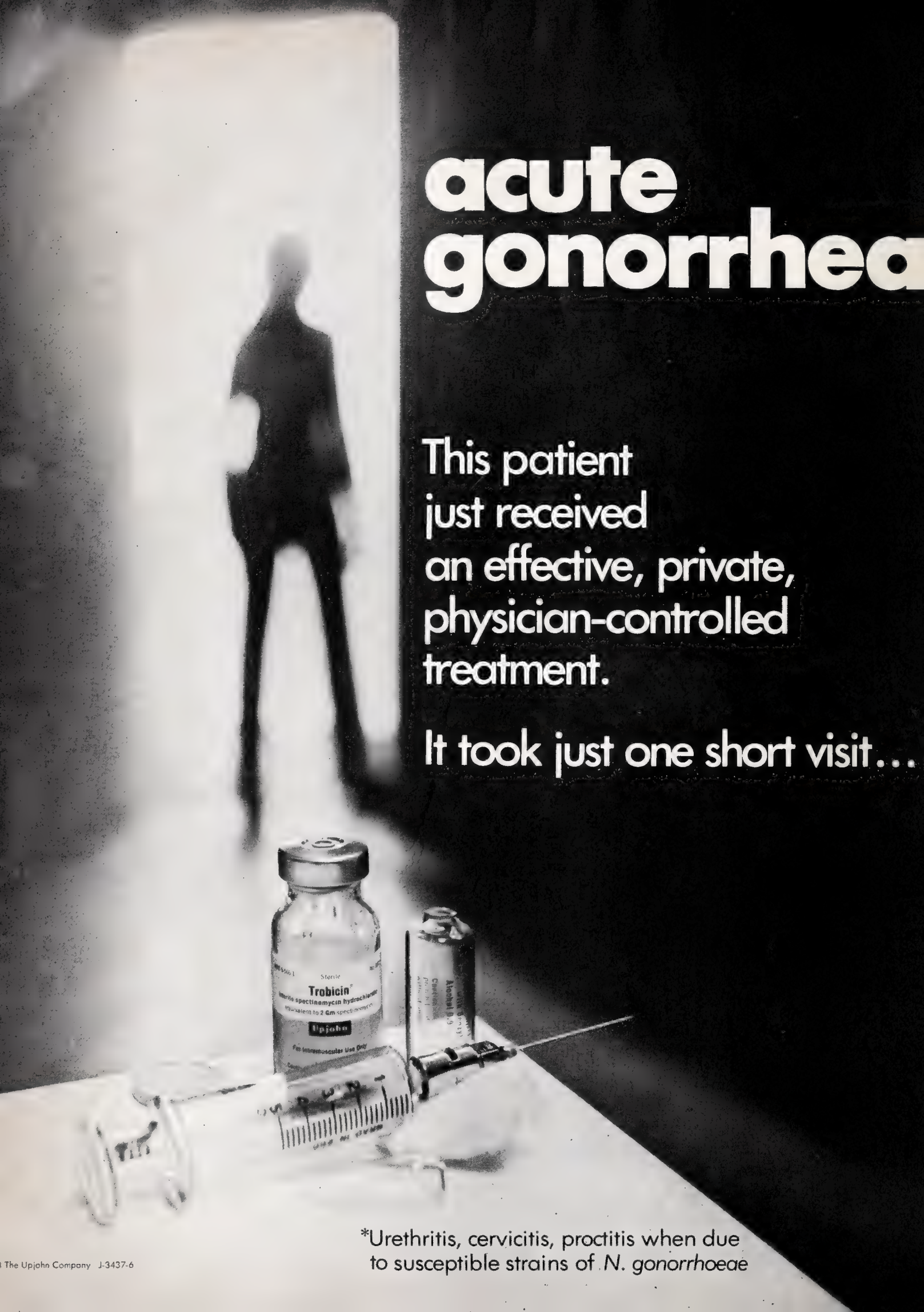
ON THE COVER

The Texas Medical Association offers so many direct and indirect services to its members that designing a cover to include all of them was impossible. The article on page 92 cites services related to the scientific aspects of medicine; they range from publication of *Texas Medicine* to answering a school child's plea:

Dear Sir: Do you have any disease booklets of different kind of diseases. For my sister and I so that we can pass in our health classes. We would thank you very much if you have them and send us some.

NEXT MONTH

Articles scheduled for October include uses and abuses of thyroid function tests; recent developments in the neurosurgical relief of pain; compensation and success of lumbar disc surgery; and abolition of opiate hunger in humans following bilateral anterior cingulotomy.



*Urethritis, cervicitis, proctitis when due to susceptible strains of *N. gonorrhoeae*

The Upjohn Company J-3437-6

Trobicin—The advantage of injectable therapy.
Once Trobicin is injected, treatment is usually complete; there can be no problems with patients sharing, skimping, skipping or forgetting medication.

Trobicin—The aspect of privacy.
There are no prescriptions to fill, no capsules to take. Neither family, friends nor co-workers need know or suspect the patient's problem.

Trobicin—Indication and dosage.
Spectinomycin is indicated only for use in acute urethritis and proctitis in the male and acute cervicitis and/or proctitis in the female when due to susceptible strains of *N. gonorrhoeae*. The usual dosage for Trobicin in adult males is 2 grams intramuscularly†; 4 grams intramuscularly in females.

Trobicin—Not effective for syphilis.
Trobicin is not effective for any stage of syphilis. Trobicin may mask or delay the symptoms of incubating syphilis. If concurrent syphilis is suspected, follow the patient serologically for at least 3 months. Patients with syphilis should receive adequate specific anti-syphilitic therapy with an appropriate antibiotic.
Trobicin is contraindicated in patients previously found hypersensitive to it.

Intramuscular

...and Trobicin® 2 gm and 4 gm vials sterile spectinomycin hydrochloride

Sterile Trobicin
Sterile Trobicin (spectinomycin hydrochloride) —For Intramuscular Injection:
2 gm vials containing 5 ml when reconstituted with diluent.
4 gm vials containing 10 ml when reconstituted with diluent.
An aminocyclitol antibiotic active *in vitro* against most strains of *Neisseria gonorrhoeae* (MIC 7.5 to 20 mcg/ml). Definitive *in vitro* studies have shown no cross resistance of *N. gonorrhoeae* between spectinomycin and penicillin.

Indications: Acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

Contraindications: Contraindicated in patients previously found hypersensitive to spectinomycin.

Warnings: Not indicated for the treatment of syphilis. Antibiotics used to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Patients should be carefully examined and monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected.
Safety for use in infants, children and pregnant women has not been established.

Precautions: The usual precautions should be observed with atopic individuals.
Clinical effectiveness should be monitored to detect evidence of development of resistance by *N. gonorrhoeae*.

Adverse reactions: The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.
During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single- and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

Dosage and administration: Keep at 25° C and use within 24 hours after reconstitution with diluent.

Male—Inject 5 ml intramuscularly for a 2 gram dose. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.
Female—Inject 10 ml intramuscularly for a 4 gram dose.

How supplied: *Vials, 2 and 4 grams—with ampoule of Bacteriostatic Water for Injection with Benzyl Alcohol 0.9% w/v.* Reconstitution yields 5 and 10 ml respectively with a concentration of 400 mg spectinomycin per ml (as the hydrochloride). For intramuscular use only.
Susceptibility Powder—for testing *in vitro* susceptibility of *N. gonorrhoeae*.
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The Upjohn Company, Kalamazoo, Michigan 49001

† For patients with gonorrheal proctitis and for patients in geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams is preferred.

NEWS

Outstanding speakers, revised format to highlight TMA fall conference Sept 21

Informative and authoritative speakers and a revised format permitting increased physician participation highlight the programming for the 1974 Texas Medical Association Conference on Medical Service and Practice Management Sept 21 at the Joe C. Thompson Conference Center in Austin.

Following an opening inspirational keynote talk by Loren Young, DD, of Griffin, Ga, two morning sessions will focus on topics of current national, as well as statewide, interest to physicians. Items for discussion are national health insurance, health maintenance organizations (HMOs), and professional standards review organizations (PSROs). Speakers will include two officials of the American Medical Association, Dr. Ernest B. Howard, executive vice president, and Dr. Max H. Parrott, president-elect. Participants in a panel session on PSRO will be Dr. Charles Max Cole, vice chairman of the Texas delegation to the AMA; Ace Pickens, TMA assistant general counsel; Dr. Joseph T. Ainsworth, chairman, TMA Council on Medical Legislation; Dr. Milton V. Davis, member, Board of Directors, Texas Institute for Medical Assessment (TIMA); and Dr. Joseph T. Painter, president, Texas Medical Foundation.

Afternoon sessions will concentrate on practice management, with particular attention to professional associations, new changes in pension and profit-sharing plans, inflation and collections, expense ratios in office practice, and the problem-oriented medical record. Featured speakers will include Horace Cotton, president, Practice Management, Inc., Albemarle, NC; Dr. Rafael C. Sanchez, Louisiana State University Medical Center, Baton Rouge; and William H. Kidd, president, Society of Medical-Dental Management and Consultants, Raytown, Mo.

The closing session will be devoted to "curbstone consultations," informal discussions providing physicians an opportunity to visit with guest speakers and conference participants. The round-table format will feature five different subjects. Physicians will be able to select the topics of their choice from table to table.

Distinguished service award to be presented

The conference will also include the presentation of the TMA Distinguished Service Award to Dr. Harvey Renger of Hallettsville. The award recognizes Dr. Renger's outstanding service to Texas medicine.

A luncheon during the conference will be sponsored by TMA. Evening entertainment will be a hospitality hour hosted by the Prudential Insurance Company of America and the TMA Group Insurance Program, and The University of Texas-University of Wyoming football game.

Other events scheduled to complement the conference weekend are various meetings of Association boards, councils, and committees, and an orientation program for new members.

Registration will begin at 8 am the morning of the conference. Programming is slated for a 9 am start.

TMA committee to undertake study of malpractice, liability insurance

Meeting July 20 in Austin, the Texas Medical Association Executive Board authorized an indepth study of malpractice and professional liability insurance in Texas.

The move complemented actions taken the day before by TMA's Board of Trustees in which funds were pledged to support an aggressive effort to deal with the problems of medical malpractice in Texas.

At the recommendation of Dr. George Alexander, president of the Harris County Medical Society, an ad hoc committee will be appointed by Dr. Ed W. Schmidt, TMA president, to study the problems, find solutions, and determine methods to guarantee the insurability of TMA members. Primary areas of concern include rising premiums for professional liability insurance, decreasing availability of coverage, and rising number of malpractice suits. A report from the committee will be called for at the House of Delegates session in Austin Nov 2.

NEWS

Assessment due

In other actions, the Executive Board set Oct 1, 1974 as the delinquency date for non-payment of the special $100 assessment, as recommended by the Board of Councilors. All physicians who were regular and provisional members as of July 1, 1974, must pay the assessment, which is due on Sept 1. A delinquent member does not have the privilege of voting, holding office, or attending the annual session, and will automatically be dropped on Dec 31, 1974, if his assessment has not been paid. These actions are consistent with the House of Delegates decision that the assessment be payable in the same manner as dues and that it carry the same penalty for non-payment.

PSRO

Extensive discussions were held regarding Professional Standards Review Organizations, including a review of the TMA policy and the policy position of the AMA taken at its annual meeting in Chicago. The Executive Board was informed that a bill was now before Congress (HR 15090), introduced by Rep Omar Burleson (D-Tex), containing 19 provisions for revision and amendment of the PSRO law. The Board voted to commend Rep Burleson and all others in Congress who oppose PSRO. The need to define the responsibilities of TMA and Texas Medical Foundation (TMF) in developing non-PSRO professional review was discussed, and the Board authorized Dr. Schmidt to appoint an ad hoc committee to coordinate and evaluate the work of TMA and TMF.
One additional ad hoc committee was authorized by the Board to study and evaluate councils of the Association.

TMA insurance plan

Four recommendations from the Committee on Association Insurance Programs and Council on Medical Service and Insurance regarding the TMA group insurance plan were approved by the Board. They were: 1) an increase of the maximum monthly benefit under the Long Term Disability Income and Office Overhead plans from $1,500 to $2,000; 2) a rate reduction, averaging 8%, for the Individual Term Insurance plan, plus the inclusion of spouse and children; 3) a 20% increase in the Major Medical plan; and 4) an increase from $100,000 to $250,000 lifetime maximum benefit per person under the Major Medical plan. The first two recommendations will be effective Nov 1, 1974; the other two took effect Aug 1.
The Executive Board meeting also included a joint session with officers and members of the Board of the Texas Nurses Association. Purpose of the discussion was to achieve greater liaison and understanding between the leadership of the two groups. Topics discussed included activities of the Texas Joint Practice Commission, the foreign nurse situation in Texas, the TNA policy position regarding their role in collective bargaining, and legislative issues of common interest and concern—institutional licensure, HMOs, and "certificate of need" proposals.

"Your problem is that you deal with crabby, irritable people all day. Hey, I think I've just diagnosed *my* problem."

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NEWS

TIMA elects directors

The Texas Institute for Medical Assessment (TIMA) adopted bylaws changes in June replacing its steering committee with a board of directors.

New board members, officers, and terms include the following: Dr. N. L. Barker, 2 yrs; Dr. J. H. Boyd (DO), 2 yrs, vice president; Dr. Eugene H. Brown (DO), 3 yrs; Dr. Michael Calabrese (DO), 1 yr; Dr. Milton Davis, 3 yrs; Dr. Gerald P. Flannagan (DO), 2 yrs; Dr. Robert Hickey, 2 yrs; Dr. Sam Key, 1 yr; Dr. Ernest Maxwell, 1 yr; Dr. Joseph T. Painter, 3 yrs, president; Dr. William F. Ross, 3 yrs, treasurer; Dr. Ed Schmidt, 1 yr; and Dr. John M. Smith, Jr., 2 yrs.

Two MD vacancies for three year terms remain. In addition, the executive director and president-elect positions have not been filled at this time.

Baylor, A&M awarded grant for new education program

A new $9.6 million medical education program has been awarded by the Veterans Administration to Texas A&M University, in affiliation with Baylor College of Medicine, Houston.

Allocated over a seven-year period with $2.4 million for the first year, funds will be used to train physicians and allied health personnel to relieve acute shortages in medical care in Texas, particularly within the VA system.

The proposed TAMU-Baylor program will provide faculty, staff, and equipment to establish medical education programs at existing VA hospitals in Temple, Waco, and Marlin. No funds are designated for construction. Baylor will lend guidance to the program.

The educational plan, approved by the Coordinating Board, Texas College and University System, will enable students to begin professional training in what would normally be their junior year of college. After two years of preclinical medicine at College Station, students will move on to clinical training at Houston, Temple, Waco, or Marlin.

September, 1975 is the expected starting date for student enrollment.

The program allows students to complete their medical education after six years with medical degrees from Baylor and TAMU jointly.

The program is part of a project stemming from the Veterans Administration Medical School Assistance and Health Manpower Training Act of 1972. The grant is contingent upon "reasonable assurance" by appropriate accrediting agencies that the program is acceptable to them.

"We are delighted with the Veterans Administration's support of this joint endeavor," Dr. Joseph M. Merrill, Baylor executive vice president, said. "By working with TAMU, Scott and White Clinic and Hospital, and the VA, we hope to reach out to Texas with expanded medical education programming."

Medical examiners issue physicians' assistant guides

A recent statement by the Texas State Board of Medical Examiners clarifies the situation in Texas regarding physicians' assistants.

The statement specifies that Texas does not license or certify physicians' assistants and the Board does not formally regulate the utilization of physicians' assistants by licensed physicians.

However, the Board recognizes that, as more physicians' assistants are being trained and employed by physicians, some guidelines for their utilization are necessary. For this reason, the Board has issued some precautions.

Physicians' assistants, like any other medical assistant or technician, are authorized to do only those acts which are performed under the control and supervision and at the instruction of a licensed physician. A

physicians' assistant may perform medical acts only so long as the physician in charge has maintained proper control and supervision over the physicians' assistant.

The Board's statement also touches on the problem which exists where persons holding the degree of doctor of medicine, doctor of osteopathy, or a foreign equivalent degree, but who are not licensed in the State of Texas, are employed as physicians' assistants. The Board emphasizes that a physicians' assistant is not licensed to practice medicine in Texas. The licensed physician should not allow his employed assistant to be held out to the public as a physician nor should he allow the assistant to use the designation "doctor," "Dr.," "MD," or "DO" as the Healing Arts Identification Act reserves these titles to persons licensed by the Board.

The Board states that failure to maintain the proper control and supervision, the allowing of a physicians' assistant to use an improper designation, or the holding out to the public of the physicians' assistant as a licensee of the Texas State Board of Medical Examiners could lead to a complaint being filed against the employing physician for "aiding and abetting the unlicensed practice of medicine" and charges being brought against the assistant for practicing medicine without a license.

Newspapers criticize PSRO

Based on newspaper clippings from various sources at press time, eleven newspapers in the state had published editorials either supporting TMA's position regarding PSRO, or citing the negative aspects of the PSRO law.

The newspapers include *The Dallas Morning News, Wichita Falls Times, Arlington News, Richardson Daily News, Dallas Suburban News, Gatesville Messenger* and *Star Forum* (reprinted *The Dallas Morning News* editorial), *San Antonio Light, Irving Daily News, Moore County News-Press, Dallas Daily Commercial Record,* and *Fort Worth Commercial Recorder.*

Reprints of the editorials published by *The Dallas Morning News* and *San Antonio Light* are available in quantity without charge to TMA members.

NEWS

Texas Tech appoints new medical dean

Dr. George S. Tyner has been appointed dean of the Texas Tech University School of Medicine, effective Aug. 5.

Dr. Tyner had been serving as associate dean for education and student affairs in the medical school. Prior to joining Texas Tech, Dr. Tyner was associate dean of the University of Colorado School of Medicine and assistant to the vice president for medical affairs.

The new dean succeeds Dr. William W. Frye who had consented to serve in the position until an appointment was made. Dr. Frye has assumed the duties of advisor to the dean on health careers.

Hardt retires from TCOM

Dr. Henry B. Hardt, DO, retired July 1 as vice president for special affairs of the Texas College of Osteopathic Medicine, Fort Worth. Dr. Hardt was the first dean of the college.

Dr. Hardt has spent more than 50 years in the field of education. He served 20 years as chairman of the chemistry department at Texas Christian University and two additional years as professor. He was appointed dean and chief administrative officer of TCOM in October 1969.

Dr. Hardt was the first president of the Texas State Board of Examiners in the Basic Sciences in 1948. He subsequently was appointed to four terms of six years each. He resigned his post when he joined TCOM.

NEWS

Family nurse practitioners to be trained in Texas

The Fort Worth and San Antonio campuses of The University of Texas System School of Nursing have received a $438,350 grant from the W. K. Kellogg Foundation of Battle Creek, Mich, to support a training program for family nurse practitioners.

The 16-week course, followed by a 32-week preceptorship under the supervision of a physician, is a continuing education program for registered nurses who want to expand their roles to include primary nursing care.

Upon completion of the course, the family nurse practitioner will be prepared to take thorough medical histories, perform basic physical assessments, and indicate normal and abnormal findings to the physician. She will provide counseling and guidance to families on nutrition, family planning, general health principles, developmental crises, preventable diseases, and cancer screening. She will be able to recognize and assist in managing minor common illnesses, carry out predetermined immunization plans, and help families find and utilize health resources available to them.

The San Antonio campus will enroll its first class of 12 students this fall. The Fort Worth school will admit its first class in January.

The FNP program was developed in consultation with the Texas Academy of Family Physicians. Two Academy members, Dr. J. Howard Frederick, San Antonio, and Dr. Bruce K. Jacobson, Fort Worth, will serve as advisors to the local programs.

In addition to nursing school faculty, the FNP program will utilize physician faculty members through agreements with the UT Medical School at San Antonio and the John Peter Smith Hospital family practice residency program in Fort Worth.

To introduce the family nurse practitioner program to nurses across the state, the UT System School of Nursing's continuing education staff will present three one-day programs on "The Nurse Practitioner's Health Care Role" this fall in Houston, Fort Worth, and San Antonio.

The program will describe the nurse practitioner concept, its potential contribution to improvement of health care and the background necessary for a nurse practitioner. Patterns of utilization in different practitioner roles will be identified and an attorney will summarize the legal implications of the role. Physicians, nurses, and other interested persons are invited to attend.

Death rate decreases for nine leading causes

A report released by the National Center for Health Statistics of the Department of Health, Education and Welfare states that mortality from nine of the 15 leading causes of death in the United States decreased from 1950 through 1969.

Heart diseases, ranked number one among the causes of death, dropped 14.7% on an age-adjusted scale during the 20-year period. The greatest decline, 76.5%, occurred in the area of nephritis and nephrosis. The most dramatic rise, 224.3%, was reported for bronchitis, emphysema, and asthma.

Other causes showing decreases included cerebrovascular disease, accidents, influenza and pneumonia, "certain causes of mortality in early infancy," arteriosclerosis, congenital anomalies, and peptic ulcer.

Causes exhibiting an increase were malignant neoplasms, diabetes mellitus, cirrhosis of the liver, suicide, and homicide.

The figures are based on "Mortality Trends for Leading Causes of Death," the second in a series of reports prepared from a study of the more than 33 million death certificates filed in the 1950s and 1960s.

Regional medical program undertakes new activities

The Regional Advisory Group of the Regional Medical Program of Texas has approved more than 30 new program activities for funding during the 1974-75 fiscal year.

RMPT has received $2.46 million from the Division of Regional Medical Programs in Washington for this fiscal year. Approximately $2 million will be used to fund program activities in five project areas.

RMPT's major project areas are 1) Texas Health Education Project, 2) Texas Health Economics and Systems Demonstration Project, 3) Health Manpower, 4) Texas Health Care Quality Program, and 5) Regional Disease Management Program.

Twelve program activities have been approved under the Texas Health Education Project to develop and test forms of health education. Among these are a pilot program of health education for the severely handicapped and/or impaired, the development and demonstration of a coordinated community health education program, a general evaluation model for audiovisual health education systems, and others.

The Texas Health Economics and Systems Demonstration Project includes eight separate programs to conduct feasibility studies, demonstrations, workshops, and information programs relating to the economics and organization of health care and how costs can be reduced. Among these are a health personnel utilization project, a grass roots organization for utilization of purchasing and sharing, a genetics services program, a coronary care and critical emergency training project for rural hospitals, and others.

The Health Manpower Program will include a cost benefit study of clinical education programs and an education and service effectiveness program.

Ten programs compose the health care quality area. The purpose of this project is to understand fully health care system and operation and to develop, identify, and test processes that will assist in the assurance of high quality health care. Among the projects are a model program for the design and implementation of a continuing medical education service for improving quality of medical care, development of self-instruction materials including cancer education for health professionals.

The Regional Disease Management Program will consist of a statewide perinatal program designed to reduce infant mortality and morbidity.

Dallas center announces program in dietetics

A four-year nutrition program has been announced by Dr. John Schermerhorn, dean of the School of Allied Health Sciences at The University of Texas Health Science Center at Dallas.

Applications are now being reviewed for the new coordinated Undergraduate Program in Dietetics to begin training dietitians in June, 1975. The program leads to a bachelor of science degree with a major in dietetics. Students will enter the program after finishing two years, or 60 hours, at a college, university, or community college.

The Dallas institution is the only health science center in the United States offering a dietetics and nutrition program leading to a degree in an exclusively upper division school.

The new program will be affiliated with the Dallas County Hospital District, Children's Medical Center, the Dallas City Health Department and St. Paul Hospital. The course of study will allow students to complete all requirements for taking the examination to become registered dietitians and to be eligible for membership in the American Dietetic Association in four years.

NEWS

Health department reports on new influenza vaccine

The Public Health Service Advisory Committee on Immunization Practices reports that a bivalent influenza vaccine for 1974-75 will contain a new type A influenza virus.

Each adult dose will contain not less than 1200 chick cell agglutinating (CCA) units of antigen in the following proportions: 700 CCA units of type A strain comparable to the prototype, A/Port Chalmers/1/73(H3N2) and 500 CCA units of a type B strain, B/Hong Kong/5/72. According to *Morbidity and Mortality Weekly Report* (June 15, 1974), producers' vaccines are highly purified and relatively free from significant adverse reaction. Minor reactions such as erythema and tenderness at the injection site and low-grade fever can be expected to occur occasionally.

Annual vaccination is recommended for older persons and individuals of all ages who have chronic debilitating conditions such as 1) congenital and rheumatic heart disease, especially mitral stenosis; 2) cardiovascular disorders, such as cardiac insufficiency; 3) chronic bronchopulmonary diseases, such as asthma, chronic bronchitis, cystic fibrosis, bronchiectasis, emphysema, and advanced tuberculosis; and 4) diabetes mellitus, and other chronic metabolic disorders.

The Committee reports that a *single dose* of vaccine for either primary or annual booster vaccination is considered adequate. Influenza vaccination should be administered by mid-November. Persons clearly hypersensitive to egg protein, ingested or injected, should not receive the influenza vaccine because it is prepared from viruses grown in embryonated eggs.

Texas students, hospitals participate in MECO project

A total of 26 Texas hospitals and 37 students participated in the 1974 Medical Education and Community Orientation (MECO) program of the Student American Medical Association.

In the MECO program pre-sophomore and pre-junior medical students are assigned to a participating hospital for several weeks during the summer. The student rotates through the clinical and non-clinical areas of the hospital and is also exposed to the other health care facilities in the community. The project offers medical students unique opportunities to receive part of their education in an actual community health care system. The MECO program is operated with the cooperation of TMA, the Texas Hospital Association, and the Texas Academy of Family Physicians.

Basic sciences exam slated for October

The Texas State Board of Examiners in the Basic Sciences has set examination dates for Oct 4-5 in Houston and Austin.

Applications for the examination must be complete and in the office of the Board by Sept 6. In addition, all necessary information and documents required of examinees by the Board must be completed and in the applicant's file by that date.

The certificate which is acquired by examination is the only one which is valid for reciprocity with other state basic science boards. The Texas Basic Science Board has reciprocity with the following states: Alabama, Arkansas, Colorado, Minnesota, Nebraska, Nevada, South Dakota, Tennessee, Washington, and Wisconsin. Those interested in participating in the examination should contact the Board, 319 Sam Houston State Office Building, Austin 78701.

HEMODYNAMICS OF ANGINA PECTORIS* — PATIENTS RESTING AND EXERCISING, BEFORE AND AFTER ISORDIL SUBLINGUAL

(isosorbide dinitrate)

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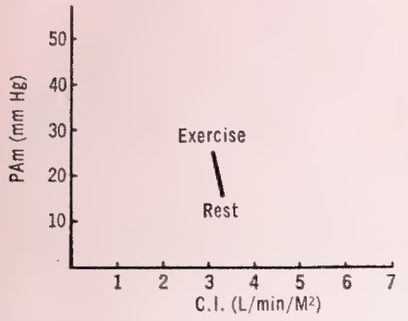
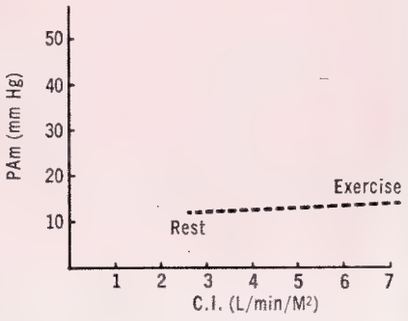
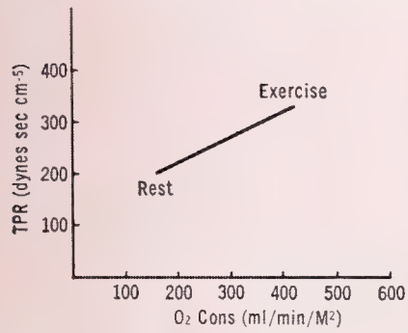
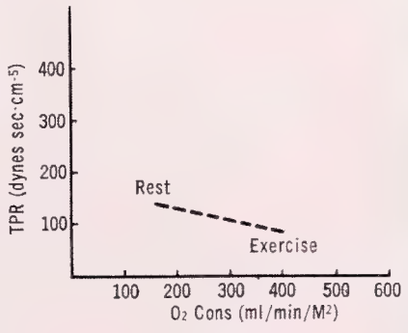
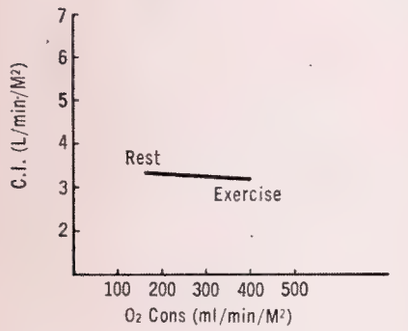
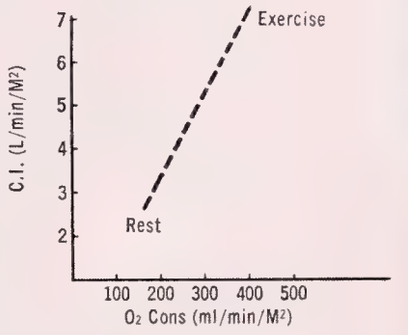
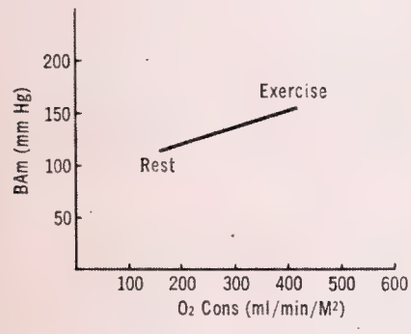
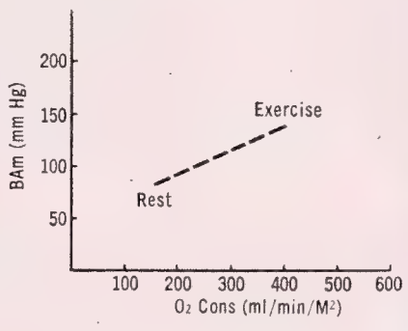
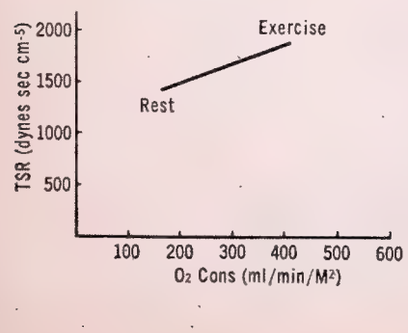
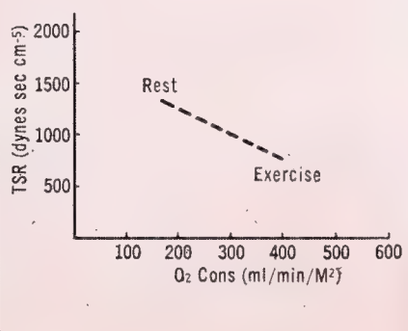
	PULMONARY ARTERY (MEAN PRESSURE)	
	TOTAL PULMONARY RESISTANCE	
	CARDIAC INDEX	
	BRACHIAL ARTERY (MEAN PRESSURE)	
	TOTAL SYSTEMIC RESISTANCE	

IN ANGINA PECTORIS*

- to abort or terminate acute anginal attacks
- to reduce the frequency and severity of anginal episodes often caused by unavoidable everyday stress

ISORDIL® SUBLINGUAL

(ISOSORBIDE DINITRATE)

SUBLINGUAL TABLETS: 2.5 mg. and 5 mg.

***Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:
"Probably" effective: When taken by the sublingual route, Isordil Sublingual is indicated for the treatment of acute anginal attacks and for prophylaxis in situations likely to provoke such attacks.
Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.

Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

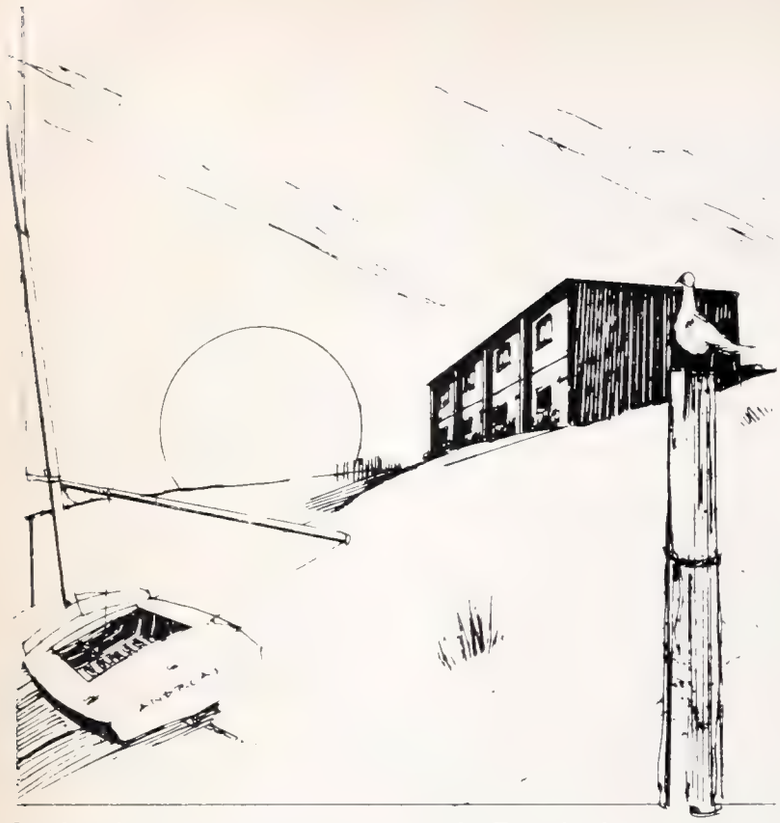
Consult direction circular before prescribing.

May we send you reprints, detailed information and/or professional samples?

IVES LABORATORIES INC.
New York, N.Y. 10017

DEDICATED TO IMPROVING THE QUALITY OF LIFE, THROUGH MEDICINE

Adapted from: Kasparian H, Najmi M, Likoff W: Laboratory Evaluation of Coronary Artery Disease. Scientific Exhibit, AMA Convention, Chicago, Ill, June 1966.



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PRESCRIBING INFORMATION

Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

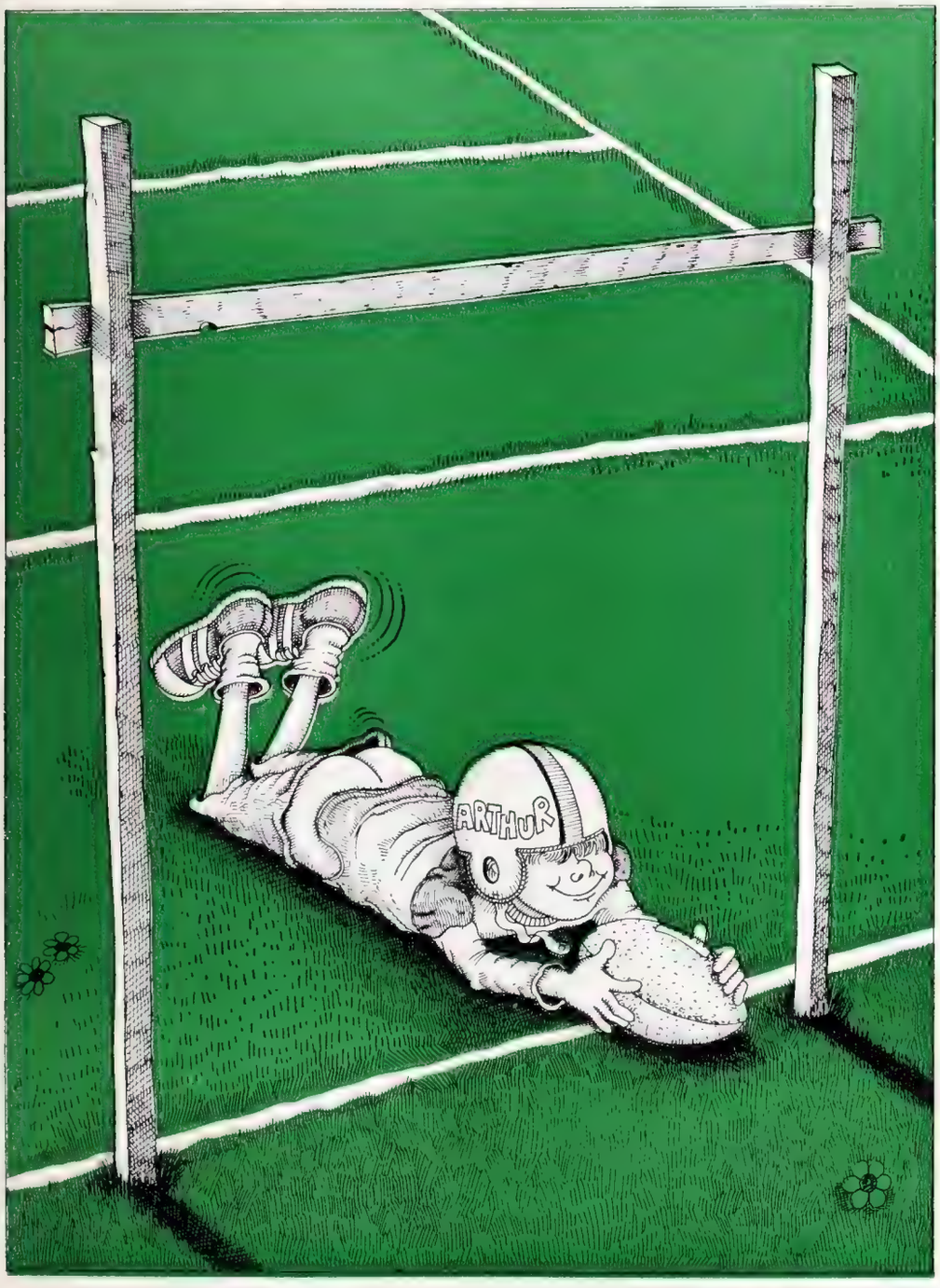
Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles and Unitcups™ of 5 cc. in packages of 12.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

WORMS BLITZED



A single dose of Antiminth (1 cc. per 10 lbs. of body weight, 1 tsp./50 lbs.—maximum dose, 4 tsp.=20 cc.) offers highly effective control of *both* pinworms and roundworms.

Antiminth has been shown to be extremely well tolerated by children and adults alike in clinical studies.* Pleasantly caramel-flavored, it is non-staining to teeth and oral mucosa on ingestion... doesn't stain stools, linen or clothing.

One prescription can economically treat the entire family.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Pinworms, roundworms controlled with a single, non-staining dose of

ANTIMINTH®

(pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

*Data on file at Roerig.

Please see prescribing information on facing page.

NEWS

Anti-smoking poster available

The National Clearinghouse for Smoking and Health has announced the availability to physicians of a poster showing whole lung sections taken from persons who smoked varying numbers of cigarettes. The poster is designed to provide a graphic argument in the counseling of patients to quit smoking.

The posters may be obtained without charge by writing: Smoking Lung Poster, Box A R, Rockville, Md 20852.

Building contract awarded for medical school expansion

The University of Texas System Board of Regents has awarded a construction contract for the Harry Moss Clinical Science Building at the UT Health Science Center at Dallas, completing the last major building link enabling the Southwestern Medical School to double its enrollment.

Total project cost of the eight-level building, including architectural and engineering fees, is listed at $12,842,536.

This fall, the medical school accepted a freshman class of 200, double the class size of four years ago. The school is committed to a projected enrollment of 800 medical students.

The new facility will house the clinical departments of surgery, internal medicine, obstetrics and gynecology, psychiatry and neurology. One and a half floors will be designated for the health science center's animal resources facility.

The structure is named for a late Dallas oilman whose will provides a a trust of $6 million to support heart research.

Exams taken by 626

The Texas State Board of Medical Examiners conducted examinations June 8-13 for 626 participants.

Of these, there were 142 pre-clinicals, 302 clinicals, 123 fulls, 20 foreign repeats, and 39 domestic repeats. The examinees included 148 foreign medical graduates.

In other actions, the Board has approved 290 reciprocity applications for licensure, 90 of which were foreign graduates. The Board denied licensure to one reciprocity applicant. Ten duplicate licenses were issued.

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment media	Original price 9-30-68	Current adjusted price 6-30-74	% Change from 9-30-68
Mercantile National Bank Stock Fund	$10.25	$ 8.93	—12.88
Loomis-Sayles Capital Development Fund	14.20	12.17	—14.30
T. Rowe Price Growth Stock Fund[2]	25.93	12.10	— 6.71
Loomis-Sayles Mutual Fund	16.82	16.70	— 0.71
Stein Roe & Farnham Balanced Fund	23.34	22.21	— 4.84
Mercantile Bank Fixed Income Fund	10.00	10.82	+ 8.20
Standard & Poor 500 Stock Average	101.34	86.00	—15.14
Dow Jones Industrial Average	935.79	802.41	—14.25

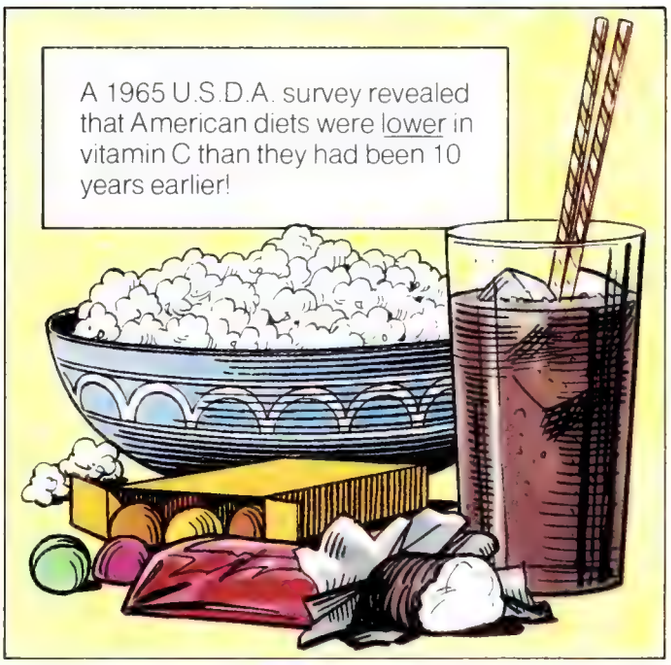
[1]Includes accumulated dividends and capital gains since 1968.

[2]Stock split two for one, May, 1973.

The ALLBEE® with C Scrapbook of Vitamin Facts & Fallacies

The Indian fruit-eating bat, almost all monkeys, man and the guinea pig are the only mammals whose bodies lack an enzyme needed to synthesize ascorbic acid from glucose! Hence they must obtain their vitamin C from exogenous sources.

De Joinville writing about a 13th century crusade reported that barber surgeons had to "cut away the dead flesh from the gums to enable people to masticate their food." The disease he described was probably scurvy.



The outer leaves of cabbage and brussels sprouts contain more vitamin C than the heads. Yet, ironically, these are often trimmed away by the grocer to improve appearance and enhance sales appeal! Many housewives trim them even more before cooking!

Available on your prescription or recommendation

ALLBEE® with C

High Potency B-Complex and Vitamin C Formula

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Spasm reactor?

Donnatal®!

	each tablet, capsule or 5 cc. teaspoonful of elixir (23% alcohol)	each Donnatal No. 2	each Extentab
hyoscyamine sulfate	0.1037 mg.	0.1037 mg.	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg.
hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital (warning: may be habit forming)	(¼ gr.) 16.2 mg.	(½ gr.) 32.4 mg.	(¾ gr.) 48.6 mg.

Brief summary. Adverse Reactions: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Contraindications: Glaucoma; renal or hepatic disease; obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); or hypersensitivity to any of the ingredients.

A·H·ROBINS A. H. Robins Company, Richmond, Virginia 23220

CAPITAL COMMENTS

WASHINGTON: WITNESSES REFUTE CHARGES OF MEDICAL MONOPOLY IN TEXAS. On July 10, representatives of the Texas Medical Association appeared before the US Senate Subcommittee on Antitrust and Monopoly to refute certain charges made on May 15. (See *Texas Medicine*, June 1974, p 27.) Appearing on behalf of TMA were Drs. John M. Smith, Jr., and Max Morales, Jr., of San Antonio, and Philip R. Overton, Sam V. Stone, Jr., and Ace Pickens of Austin. Mr. Overton refuted charges that the cost of medicine in Texas was manipulated by a small group and that rising hospital construction costs in Texas were due to "construction hungry doctors." Dr. Morales explained the role of the Bexar County Medical Foundation, its involvement with the Department of Health, Education and Welfare (HEW), and its problems and successes in relationship to the operation of a health maintenance organization (HMO) in Bexar County. Mr. Stone testified with reference to the position of TMA on HMOs and the activities of the Texas State Board of Medical Examiners in relationship to Article 4509a of the Texas statutes. Dr. Smith testified as to the purpose and activities of TMA, its programs, and its efforts in relationship to improving health statistics and delivery of health care to the poor and migrants. Mr. Pickens testified in relationship to the utilization review developmental contract, the Texas Admissions and Review Program (TARP), by the Texas Medical Foundation. He refuted charges that there were conflicts of interest and overlapping directorships between the Texas Medical Foundation and Blue Cross of Texas. In addition, documented proof was offered to refute an allegation that TEXPAC had committed a felony under Texas campaign contribution laws. The witnesses before the Subcommittee repeatedly presented testimony and proof which conclusively showed that the witnesses on May 15 had made unfounded and untrue charges. Dr. Morales summed up the opinions of the witnesses by saying that charges by previous witnesses that the medical society controlled the delivery of health care were nothing more than a "tissue of lies."

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

AUSTIN: ATTORNEY GENERAL RULES ON HMOs. On July 11, Attorney General John Hill of Texas rendered Opinion No. H-344 as to whether prepaid health insurance plans are subject to insurance regulatory laws. (For details see Medicine and the Law, p 113.)

WASHINGTON: CHEMICAL AND THERAPEUTIC EQUIVALENCY OF DRUGS STUDIED. In response to a request by Sen Edward M. Kennedy, the Office of Technological Assessment of the US Congress was requested to perform a study to examine the relationship between the chemical and therapeutic equivalency of drug products. The conclusions and recommendations of the office were that current standards in regulation practice do not assure bioequivalency for drug products. This study fully refutes the concept that the high quality of products and research incentives in industry can be maintained while price is at the lowest level or dictated by the government. The study also undercuts the Dec 19 proposal of HEW which would limit reimbursement for prescription

drugs under federal programs to the lowest cost product generally available. Despite the questions raised by the study, HEW still plans to push for price regulations to encourage use of generic drugs.

AUSTIN: STUDY ON ELECTROLOGY. The Texas Senate Subcommittee on Public Health and Welfare has issued an interim study on electrology. That report stated, "Keeping in mind the principal purpose for licensing legislation, plus the fact that those involved within the profession itself have not ironed out their differences concerning legislation, the Subcommittee respectfully recommends that no legislation be enacted regarding the regulation of the electrology profession in Texas."

WASHINGTON: DEBATE CONTINUES ON HEALTH PLANNING. Health planning legislation is still being considered by the House Subcommittee on Public Health and Environment. The subcommittee has reached several tentative decisions in its continuing markup of proposed health planning legislation. A proposal to require or to provide federal financial incentives for state rate regulation was defeated 8 to 1. The subcommittee, however, adopted a requirement that the local agencies monitor individual institutional rates within the state and publicly comment on such rates. Also included in the draft are provisions to require states to have certificate of need legislation or similar legislation relating to the construction of new facilities. The subcommittee draft contains provisions which, in addition to a prohibition of Medicare or Medicaid reimbursement, would add a prohibition against third party payments for amounts representing depreciation by noncertified facilities. States would also be required within three years to review and comment upon the need for all facilities and services that are being provided within the state. A motion to provide federal sanctions against facilities not in compliance with such state review was defeated.

AUSTIN: CONSTITUTIONAL CONVENTION EXPIRES WITHOUT AGREEMENT. The Constitutional Convention of 1974 ended at midnight July 30, three votes short of the necessary vote to submit a new constitution to the Texas voters. This will result in the medical practitioner section remaining the same as in the current constitution.

WASHINGTON: PROGRAM REVIEW TEAMS. The Social Security Administration recently published proposed rules governing the implementation of Sec 229 of PL 92-603 which authorizes the Secretary of HEW to exclude from coverage under Medicare and Medicaid items and services rendered by physicians and other providers who have committed program abuses. The proposed rules call for the establishment of program review teams for the purpose of reviewing services rendered under Medicare and Medicaid. Both the AMA and TMA have filed statements in response to these proposed rules pointing out that certain functions of the review teams could be transferred to professional standards review organizations (PSROs) under the proposed rules at such time as the PSROs are in operation. Some functions would apparently remain with the program review teams on a permanent basis. TMA also commented that the proposed rules failed to set forth essential elements of the program, noting that the number of members to be appointed to such teams is not specified nor is there

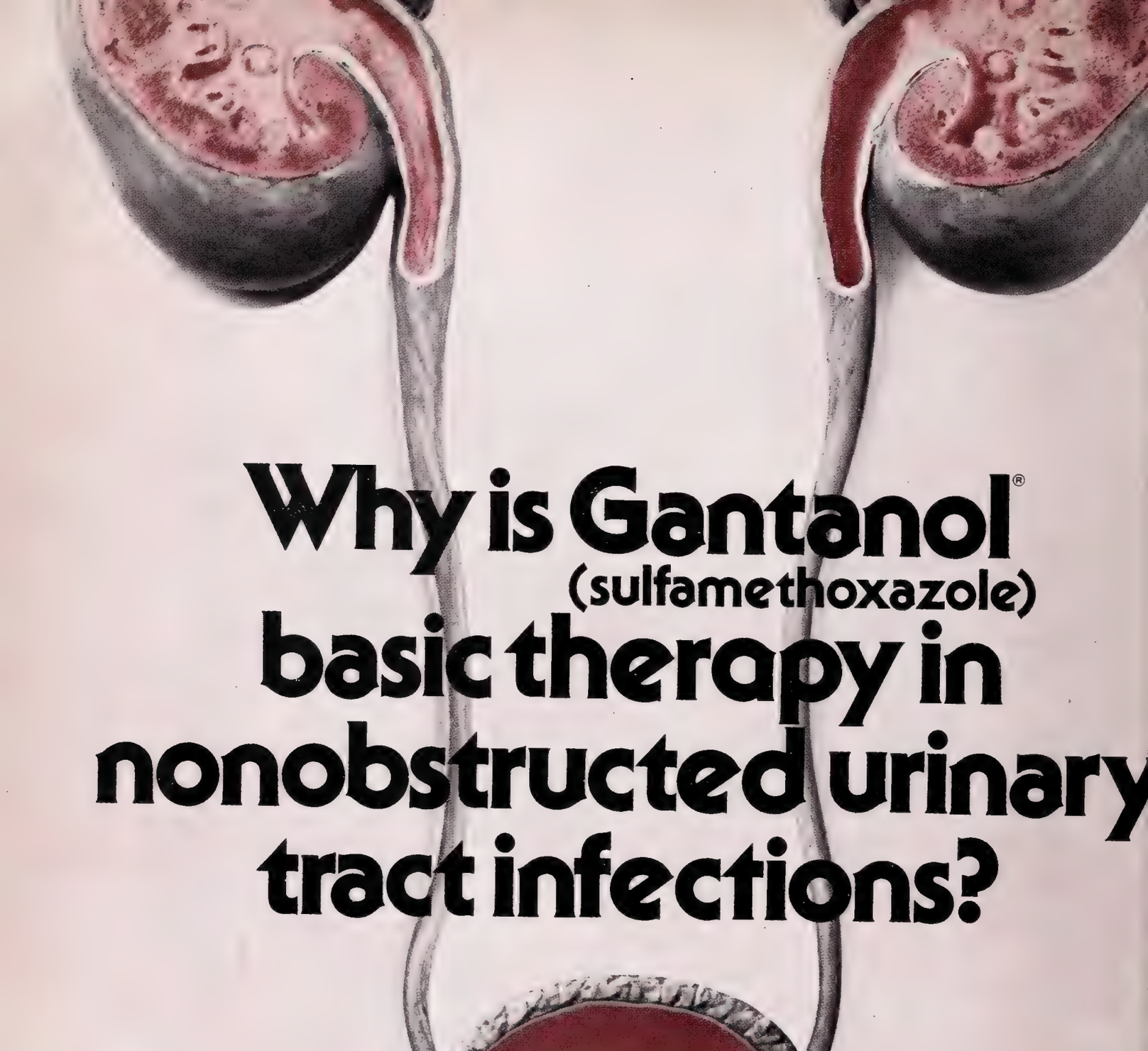
any indication as to the relative numbers of physicians, professional health care personnel, and consumer representative which would constitute the respective teams. While major responsibility of the teams would be to determine whether the *charges* for items or services rendered were *substantially in excess* of customary charges, the purported rules do not define these critical phrases. TMA further remarked that Sec 229 in the proposed rules conflicts with the PSRO law, as well as other sections of the Social Security Act, and could contradict the Medicare reimbursement procedures which are currently set forth in detail in the law in relationship to nonassignments. TMA and the AMA have urged that the proposed rules be withdrawn and that any further action pursuant to Sec 229 be republished in the form of proposed rules with adequate opportunity for comment.

WASHINGTON: PROPOSED TITLE XVIII PAYMENTS FOR RADIATION THERAPY. Rep Dick White of El Paso has introduced HR 15429 to amend Title XVIII of the Social Security Act to provide payment under Part A for care and treatment furnished by a central radiation therapy treatment facility and to provide for full payment under Part B for radiation therapy services furnished by physicians to inpatients or outpatients of any hospital of any such facility. This was in response to requests by physicians in El Paso and other portions of Texas. The bill has been referred to the Committee on Ways and Means.

WASHINGTON: HMO AMENDMENT. Rep William R. Roy (D-Kan) has introduced HR 15739 to amend the recently enacted federal HMO law which, if passed, would make it substantially more desirable for existing multispecialty fee-for-service group practices to consider converting portions of their resources to the HMO mode. The amendment would remove the provision in the current law that for fee-for-service groups convert more than 50% of their practice to prepayment.

CALIFORNIA: LESS THAN HALF OF MEDI-CAL PAYMENTS SPENT ON HEALTH CARE. The California auditor general has recently found that 52% ($29.4 million) of the total payments of $56.5 million to 15 prepaid health plan contractors under Medi-Cal went for "administrative costs or resulted in net profits." Only 48% ($27.1 million) of the total was spent on health care services. The study has been cited by opponents of a publicly financed national health insurance program as typical of the abuses such a program would generate.

WASHINGTON: SENATOR BACKS SELF-POLICING CONCEPT FOR PROFESSION. In a recent interview before the editors of *Washington Information; National Health Insurance,* Sen Clifford P. Hansen (R-Wyo) stated that "It is not inappropriate for the federal government to have some mechanism to assure that there are not abuses in an NHI program, such as doctors performing procedures which are not necessary or hospitalizing patients for a longer period of time than is medically required." Hansen supported the idea that within the framework of a peer review concept, professional organizations can be self-policing. According to Hansen, peer review should be "left as nearly exclusively as possible to doctors themselves, without putting a bureaucratic overlay on top of it."



Why is Gantanol® (sulfamethoxazole) basic therapy in nonobstructed urinary tract infections?

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or pre
vent sequelae (rheumatic fever, glomerulonephritis
of such infections. Deaths from hypersensitivity reac
tions, agranulocytosis, aplastic anemia and other bloo
dyscrasias have been reported and early clinical signs (sor
throat, fever, pallor, purpura or jaundice) may indicate seriou
blood disorders. Frequent CBC and urinalysis with microscopi
examination are recommended during sulfonamide therapy. Insuff
cient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal o
hepatic function, severe allergy, bronchial asthma; in glucose-6
phosphate dehydrogenase-deficient individuals in whom dose
related hemolysis may occur. Maintain adequate fluid intake t
prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplas
tic anemia, thrombocytopenia, leukopenia, hemolytic anemia, pur

Because it is considered a good choice...

- for efficacy in nonobstructed cystitis, pyelonephritis and pyelitis
- for control of susceptible *E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris*
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Basic Therapy

Gantanol®

(sulfamethoxazole)

Tablets/Suspension
(0.5 Gm) (0.5 Gm/teasp.)

pura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

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Nutley, N.J. 07110

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Unique design. In shape, size and color, CAMA looks like no other aspirin. It gives patients an "individualized" medication—one they may find more acceptable and possibly respond to more positively.

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Information for authors

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each paper is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material.

Manuscripts should be typed double-spaced with ample margins on firm paper. Carbons are unacceptable, but the author should keep a copy.

The *title* should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

The *author's names* and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

The *text* should be narrative with complete sentences, *few abbreviations,* and logical subheading. For *spelling and usage* the editors follow "Dorland's Illustrated Medical Dictionary," 24th edition, and "Webster's Third New International Dictionary, Unabridged." *Quotations* must give credit to both author and source. A concise *introductory summary* is required.

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, top, author's name, and title of article in brief. *Legends* should be in complete sentences, numbered, and typed on a separate sheet. *Color illustrations* are authorized if they are of special value.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Permission should be obtained from the publishers and the authors for any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited in the bibliography. Copies of permission letters should be submitted with the manuscript.

All material is subject to *editing,* but authors receive typescripts to check before publication. Prompt return of typescripts to *Texas Medicine* office avoids delay in publication. After the article is sent to the printer, only minimal revision may be made.

Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Editorials should be prepared in the same general manner, and should be written in clear, concise language. They should be 300-500 words in length (about two to three pages typed with double spacing.)

Contributions to the news section should be sent to the Editorial Offices, 1801 N. Lamar Blvd., Austin 78701, by the 5th of the month preceding the month of publication.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Contributions, previously unpublished, are welcomed for review. News and other items should be sent to the Editorial Offices six weeks prior to publication. All contributions are sent at the owner's risk.

Scientific Articles are reviewed by technical and specialist consultants and are selected for publication in Texas Medicine by the Scientific Publication Committee, which is appointed by the Board of Publication. Editorials and other articles are subject to review by officers of the Texas Medical Association, appropriate expert and technical consultants, and representatives of county medical societies when in their purview.

Scientific Publication Committee: Joseph M. Abell, Jr., MD, Austin, Chairman; Robert Askew, MD, Austin, Vice-Chairman; Ronald P. Boren, MD, Austin; Ernest C. Butler, MD, Austin; Jesse D. Cone, MD, Odessa; C. W. Daeschner, MD, Galveston; George A. Gates, MD, San Antonio; Stanton W. Glazener, MD, Austin; Tracy R. Gordy, MD, Austin; R. Maurice Hood, MD, Lubbock; Joseph Lancaster, MD, Austin; Paul C. Peters, MD, Dallas; Richard S. Ruiz, MD, Houston; H. Irving Schweppe, Jr., MD, Houston; Theodore P. Votteler, MD, Dallas.

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Rondomycin®
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CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.
WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**
Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)
Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.
Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)
All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.
Tetracyclines are present in milk of lactating women taking tetracyclines.
To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.
Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).
Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.
Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.
USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.
For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.
Eaton Agent pneumonia: 900 mg daily for six days.
Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.
Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.
Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.
In patients with renal impairment (see **WARNINGS**) total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.
In streptococcal infections, a therapeutic dose should be given for at least 10 days.
SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73

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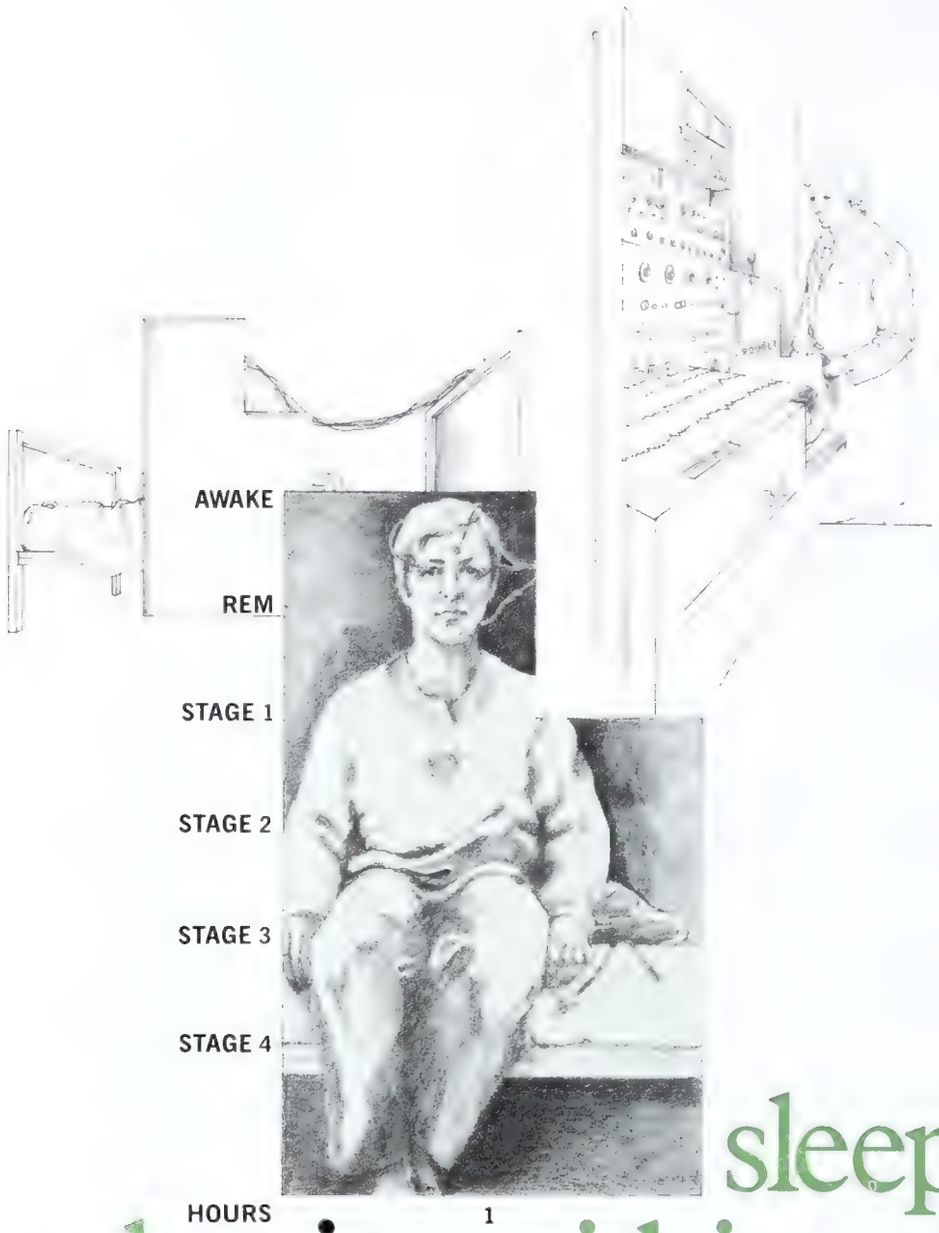
*Since many strains are known to be resistant, routine sensitivity testing is recommended.



sleep begins within 17 minutes, on average ...

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proved by a 22-night clinical study of insomnia patients in the sleep research laboratory and at home[1]

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]

confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage.[2-5]

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

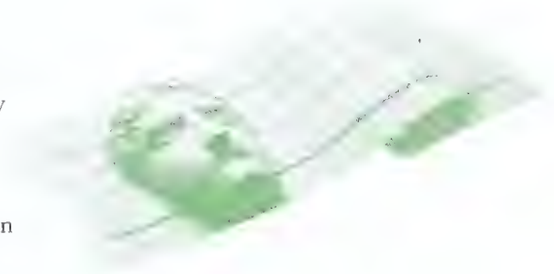
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



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One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage

REFERENCES: 1. Kales A, *et al*: *Arch Gen Psychiatry 23*:226-232, Sep 1970
2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
3. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

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Because man can neither synthesize vitamin C nor store most of the water soluble vitamins, these nutrients must be replenished continuously in order to maintain normal tissue levels.

Generally, this is accomplished in his daily diet. But under conditions of illness, stress, in convalescence or following surgery, vitamin stores may be depleted or metabolic demands increased.

In such cases, Surbex-T may be indicated. Surbex-T restores the water-soluble vitamins with each tablet providing 500 mg. of vitamin C plus high potency B-complex.

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COMING MEETINGS

TEXAS MEDICAL ASSOCIATION

The Texas Medical Association will present its 1974 Conference on Medical Service and Practice Management Sept 21 at the Joe C Thompson Conference Center in Austin. Dr. Ernest B Howard, executive vice president of the AMA, will speak on National Health Insurance—What's Ahead for Medicine? An objective look at health maintenance organizations will be presented by Dr. Max H Parrott of Portland, Ore. Dr. Parrott is president-elect of the AMA. Other speakers include Dr. Rafael C Sanchez, Baton Rouge; Mr. Horace Cotton, Albemarle, NC; and Mr. William H Kidd, Raytown, Mo. A panel session on professional standards review organizations and curbstone consultations are also included in the program. Following the program will be a hospitality hour hosted by the Prudential Insurance Company of America and the Texas Medical Association Group Insurance Program.

Contact: C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Dir.

TEXAS PEDIATRIC SOCIETY

The 52nd annual meeting of the Texas Pediatric Society will combine with business meetings of the Texas Chapter of the American Academy of Pediatrics and the Texas Society of Pediatric Surgeons Sept 19-21 at the Rodeway Inn in El Paso. Scientific program topics include apnea at birth, regionalization of perinatal health care, long and short term effects of maternal-infant separation, congenital postural deformities, advances in infant nutrition and others. The meeting will be followed by a post-meeting seminar tour to Mazatlan with Dr. Sydney Gellis as a daily lecturer while in Mexico.

Contact: Dr. Laurance N Nickey, Texas Pediatric Society, 1515 N Oregon St, El Paso 79902, VPres.

NUECES COUNTY MEDICAL SOCIETY CHILD ABUSE INSTITUTE

Multi-disciplinary planning is underway for this Institute scheduled for Sept 12-13 at Del Mar College Auditorium in Corpus Christi. Registration is to be limited to 1,800 participants. The fee is $6. Speakers will include Dr. Eli H Newberger, Boston Children's Hospital Medical Center; Dr. Brandt Steele, University of Colorado Medical Center, Denver; Dr. John B Reinhart, Children's Hospital, Pittsburgh, Pa; Judge James Delaney, Brighton, Colo; Leontine Young, PhD, executive director, Child Services Association of America, Newark, NJ; and Prof Chris Flammang, University of Illinois, Champaign, Ill. The institute has been approved for 13 elective credits by the American Academy of Family Physicians. Pre-registration will be conducted during the month of August.

Contact: Mrs. Jean Oliver, Nueces County Medical Society, PO Box 5280, Corpus Christi 78405, Exec Sec.

CURRENT MEETINGS IN TEXAS

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY has scheduled its annual scientific meeting Oct 6-10 at the Convention Center in Dallas. The major speaker will be Dr. Charles C Edwards, assistant secretary of health for the Department of Health, Education and Welfare. There will be a total of 519 instructional courses conducted throughout the meeting. Topics for scientific sessions in ophthalmology include reconstructive plastic surgery, the problem of blindness in the world, automatic refraction, and modern advances in the treatment of strabismus. Topics for the otolaryngology sessions focus on the socioeconomic aspects of medicine including professional standards review organizations and malpractice. The session will also feature 59 scientific exhibits. A special exhibits visitation day is set for Oct 8 for nonmembers, physicians not registered for the scientific meeting and others affiliated with health organizations. Contact: Dr. C M Kos, American Academy of Ophthalmology and Otolaryngology, 15 Second St, SW, Rochester, Minn 55901, Exec Sec-Treas.

UNIVERSITY OF TEXAS SCHOOL OF ARCHITECTURE graduate program in community and regional planning is sponsoring an interdisciplinary conference entitled "Designing a Humane Environment, The Human Response to Physical Space" Nov 1 at the Joe C Thompson Conference Center in Austin. The conference, limited to 50 participants, will focus on community planning and the physical setting of health care institutions in relation to the mental well-being of patients. Basic questions to be discussed include: How does physical space influence our behavior? Has our built environment made us sick? Should we examine the room before we examine the patient? Conference leader is Dr. Aristides Esser, psychiatrist and architect. He is associated with the Rockland County State Hospital, New York, and is president of ASMER, American Synergistics Man and Environment Relations. The fee for the meeting is $40. Contact: Reynell Parkins, PhD, The University of Texas School of Architecture, Austin 78712.

CURRENT NATIONAL MEETINGS

AMERICAN COLLEGE OF PHYSICIANS is conducting its Oklahoma Regional Meeting Sept 26-28 at the Shangra-La Lodge on Monkey Island, Grove, Okla. Specialists in internal medicine and related medical fields will attend the three-day scientific meeting designed to bring physicians up-to-date on the latest developments in the field. Contact: Dr. Robert M Bird, 800 NE 13th St, Oklahoma City, Okla 73104.

For other courses and symposiums, see Continuing Education Courses, pp 39-40.

Calendar of Listings

■ Denotes Texas Meetings

SEPTEMBER

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, Denver, Sept 23-29, 1974. Dene R Murray, One E Wacker Dr, Suite 1510, Chicago 60601, Exec Dir.

AMERICAN ASSOCIATION OF MEDICAL CLINICS, Washington, DC, Sept 4-8, 1974. James B Cobb, PO Box 949, Alexandria, Va 22313, Exec Off.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Hot Springs, Ark, Sept 4-7, 1974. Dr. J Donald Woodruff, Johns Hopkins Hospital, Baltimore 21205, Sec.

AMERICAN ROENTGEN RAY SOCIETY, San Francisco, Sept 24-27, 1974. Dr. Ted F Leigh, Emory University Clinic, Atlanta, Ga 30322, Exec Sec.

■ BLACKFORD MEMORIAL LECTURES, Denison, Sept 7, 1974. Dr. John D Gleckler, 211 N Fannin, Denison 76020, Chrmn.

FLYING PHYSICIANS ASSOCIATION, Biloxi, Miss, Sept 22-27, 1974. Albert Carriere, 801 Green Bay Rd, Lake Bluff, Ill 60044, Business Counsel.

■ TEXAS SOCIETY OF CHILD PSYCHIATRY, Corpus Christi, Sept 20-22, 1974. Dr. Carl Pfeifer, 2939 W Woodlawn, San Antonio 78228, Pres.

WORLD MEDICAL ASSOCIATION, Stockholm, Sweden, Sept 1-8, 1974. Ms. Margaret L Natwick, World Medical Association, 10 Columbus Circle, New York 10019, Exec Sec.

OCTOBER

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Los Angeles, Oct 14-17, 1974. Roger Tusken, American Academy of Family Physicians, 1740 W 92nd St, Kansas City, Mo 64112, Exec Dir.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, Cincinnati, Oct 15-20, 1974. J J Garvey, 2317 W Jefferson St, Suite 208, Joliet, Ill 60435, Exec Sec.

■ AMERICAN ASSOCIATION OF OPHTHALMOLOGY, Dallas, Oct 5-10, 1974. Lawrence A Zupan, 1100 17th St NW, Washington, DC, 20036.

AMERICAN CANCER SOCIETY, New York City, Oct 14-18, 1974. Lane W Adams, 219 E 42nd St, New York 10017, Exec VPres.

AMERICAN COLLEGE OF GASTROENTEROLOGY, Bal Harbour, Fla, Oct 21-26, 1974. Mr. Daniel Weiss, 299 Broadway, New York 10007, Exec Dir.

AMERICAN COLLEGE OF SURGEONS, Miami Beach, Oct 21-25, 1974. Dr. C Rollins Hanlon, American College of Surgeons, 55 E Erie St, Chicago 60611, Dir.

AMERICAN DIETETIC ASSOCIATION, Philadelphia, Oct 7-11, 1974. Robert M Crum, JD, American Dietetic Association, 620 N Michigan Ave, Chicago 60611, Exec Dir.

AMERICAN FRACTURE ASSOCIATION, Atlanta, Oct 20-23, 1974. Dr. H W Wellmerling, 600 Livingston Bldg, Bloomington, Ill 61701, General Sec.

AMERICAN MEDICAL RECORD ASSOCIATION, San Francisco, Oct 13-17, 1974. Mrs. Mary Waterstraat, 815 N Michigan Ave, Suite 1850, Chicago 60611, Exec Sec.

AMERICAN PUBLIC HEALTH ASSOCIATION, New Orleans, Oct 20-24, 1974. American Public Health Association, 1015 18th St, NW, Washington, DC 20036.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, Washington, DC, Oct 12-16, 1974. John W Andes, 515 Busse Hwy, Park Ridge, Ill 60068, Exec Sec.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Washington, DC, Oct 4-11, 1974. Dr. George F Stevenson, 2100 W Harrison, Chicago 60612.

■ AMERICAN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGEONS, Houston, Oct 27-Nov 1, 1974. Dallas Whaley, 29 E Madison, Chicago, Ill 60602, Exec VPres.

INTERNATIONAL CANCER CONGRESS, Florence, Italy, Oct 20-26, 1974. Dr. Murray M Copeland, M D Anderson Hospital and Tumor Institute, Houston 77025.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct 12, 1974. Carlie Umphres, PO Box 3276, Amarillo 79106, Exec Sec.

THIRD WORLD CONGRESS, COLLEGIUM INTERNATIONALE CHIRURGIAE DIGESTIVAE, Chicago, Oct 10-14, 1974. Secretariat, University of Illinois Department of Surgery, PO Box 6998, Chicago 60680.

NOVEMBER

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, San Francisco, Nov 16-19, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN ASSOCIATION OF BLOOD BANKS, Anaheim, Nov 9-14, 1974. Ms. Lois James, 1828 L St NW, Washington, DC 20036, Exec Sec.

■ AMERICAN ASSOCIATION FOR RESPIRATORY THERAPY, Dallas, Nov 22-27, 1974. Winfield Singletary, 7411 Hines Pl, Dallas 75235, Exec Off.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, Washington, DC, Nov 4-6, 1974. Arthur E Auer, 241 E Saginaw, East Lansing, Mich 48823, Exec Dir.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, San Francisco, Nov 20-22, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN DENTAL ASSOCIATION, Washington, DC, Nov 10-14, 1974. C Gordon Watson, 211 E Chicago Ave, Chicago 60611, Exec Dir.

■ AMERICAN HEART ASSOCIATION, Dallas, Nov 18-23, 1974. William W Moore, 44 E 23rd St, New York 10010, Exec Off.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, New Orleans, Nov 5-10, 1974. F D Nowlin, 800 Washington Ave SE, Minneapolis 55414, Exec Sec.

AMERICAN SOCIETY OF CYTOLOGY, New York, Nov 6-9, 1974. Dr. Warren R Lang, Health Sciences Center, 130 S 9th St, Suite 1006, Philadelphia 19105, Sec-treas.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, Chicago, Nov 10-14, 1974. Dr. John A D Cooper, One Dupont Circle, NW, Washington, DC 20036, Pres.

INTERNATIONAL COLLEGE OF SURGEONS, Portland, Ore., Nov, 1974. Dr. Virgil T DeVault, 1516 Lake Shore Dr, Chicago 60601, Exec Off.

MEDICAL SOCIETY OF THE US AND MEXICO, Guadalajara, Mex, Nov 6-10, 1974. Mrs. Virginia E Bryant, 333 W Thomas, No 207, Phoenix, Ariz 85013, Exec Sec.

SOUTHERN MEDICAL ASSOCIATION, Atlanta, Nov 17-20, 1974. Robert F Butts, 2601 Highland Ave, Birmingham 35210, Exec Dir.

■ **TEXAS ACADEMY OF FAMILY PHYSICIANS, Galveston, Nov 9-13, 1974. Donald C Jackson, 1905 N** Lamar Blvd, Austin 78705, Exec Dir.

■ **TEXAS MEDICAL ASSOCIATION, House of Delegates, Austin, Nov 2-3, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Dir.**

■ **TEXAS NURSING HOME ASSOCIATION, Houston, Nov 20-22, 1974. Sidney D Rich, 6225 Highway 290E, Austin 78723, Exec VPres.**

■ **TEXAS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Houston, Nov 1-2, 1974. Dr. Bert A DeBord, Scott and White Clinic, Temple 76501, Sec.**

WEST COAST ACUPUNCTURE RESEARCH INSTITUTE, Beverly Hills, Nov 16-18, 1974. Dr. Herman V Platt, 8907 Wilshire Blvd, Beverly Hills, Calif 90211, Med Dir.

DECEMBER

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec 4-7, 1974. Mrs. Betty Suor, 1116 S 5th, Tacoma, Wash 98405, Exec Sec.

AMERICAN ACADEMY OF PSYCHOANALYSIS, Kingston, Jamaica, Dec 5-8, 1974. Dr. Joseph Barnett, 8 E 77th St, New York 11029.

■ AMERICAN COLLEGE OF PHYSICIANS, Galveston, Dec 6-7, 1974. Dr. Robert A Hettig, Baylor University College of Medicine, 1200 M D Anderson Blvd, Houston 77025.

AMERICAN MEDICAL ASSOCIATION, Portland, Ore, Dec 1-4, 1974. Dr. Ernest B Howard, 535 N Dearborn St, Chicago 60610, Exec VPres.

■ **AMERICAN MEDICAL WOMEN'S ASSOCIATION, Houston, Dec 1-3, 1974. Dr. Claudine Moss Gay, 403 E Capitol St, Washington, DC 20003, VPres.**

AMERICAN SOCIETY OF HEMATOLOGY, Atlanta, Dec 7-10, 1974. Charles B Slack, 6900 Grove Road, Thorofare, NJ 08086.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Dec 1-6, 1974. Miss Adele Swenson, 713 E Genesee St, Syracuse, NY 13210, Exec Dir.

SOUTHERN SURGICAL ASSOCIATION, Boca Raton, Fla, Dec 9-11, 1974. Dr. W Dean Warren, Emory University, Atlanta 30322, Sec.

■ SOUTHWESTERN GYNECOLOGIC ASSEMBLY, Dallas, Dec 5-7, 1974. Dr. Marvin Gerard, 670 W Arapaho, Suite 2, Richardson 75080, Chrmn.

■ **TEXAS ACADEMY OF INTERNAL MEDICINE, Galveston, Dec 5, 1974. Dr. Tom W Duke, PO Box 3460, Amarillo 79106, Sec.**

■ **TEXAS SOCIETY OF INTERNAL MEDICINE, Galveston, Dec, 1974. Dr. Willis A Seyffert, Jr, 6006 N Mesa, #100, El Paso 79912, Sec-treas.**

JANUARY

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, New York City, Jan 26-31, 1975. William Bevan, 1515 Massachusetts Ave, Washington, DC 20005, Exec Off.

■ AMERICAN COLLEGE OF SURGEONS, SOUTH TEXAS CHAPTER, Galveston, Jan 30-Feb 1, 1975. Dr. Peter B Fisher, 615 Medical Twrs, Houston, 77025.

■ **TEXAS MEDICAL ASSOCIATION, Austin, Jan 17-19, 1975. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Dir.**

■ **TEXAS SOCIETY OF PATHOLOGISTS, El Paso, Jan 24-26, 1975. Dr. John A Webb, 704 Medical Towers, Houston 77025, Sec.**

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, San Diego, Feb 15-19, 1975. James O Kelley, 225 E Michigan St, Milwaukee 53202, Exec Off.

AMERICAN ACADEMY OF FORENSIC SCIENCES, Chicago, David A Crown, Room 3517, State Dept, Washington, DC 20520, Pres.

■ AMERICAN COLLEGE OF CARDIOLOGY, Houston, Feb 10-13, 1975. William D Nelligan, 9650 Rockville Pike, Bethesda 20014, Exec Off.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, Orlando, Fla, Feb 28-Mar 5, 1975. Dr. B F Alfano, 675 Main St, Melrose, Mass 02176, Sec.

■ INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS, San Antonio, Feb 27-28, 1975. S E Cockrell, Jr, 202 W French Pl, San Antonio 78212, Exec Off.

PAN-PACIFIC SURGICAL ASSOCIATION, Honolulu, Feb 15-21, 1975. Dr. John R Watson, 236 Alexander Young Bldg, Honolulu 96817, Chrmn of the Bd.

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BRIEF SUMMARY
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Indications: Based on a review of PREMARIN Tablets by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications for use as follows:
Effective: As replacement therapy for naturally occurring or surgically induced estrogen deficiency states associated with: the climacteric, including the menopausal syndrome and postmenopause; senile vaginitis and kraurosis vulvae, with or without pruritus.
"Probably" effective: For estrogen deficiency-induced osteoporosis, and only when used in conjunction with other important therapeutic measures such as diet, calcium, physiotherapy, and good general health-promoting measures. Final classification of this indication requires further investigation.

Contraindications: Short acting estrogens are contraindicated in patients with (1) markedly impaired liver function; (2) known or suspected carcinoma of the breast, except those cases of progressing disease not amenable to surgery or irradiation occurring in women who are at least 5 years postmenopausal; (3) known or suspected estrogen-dependent neoplasia, such as carcinoma of the endometrium; (4) thromboembolic disorders, thrombophlebitis, cerebral embolism, or in patients with a past history of these conditions; (5) undiagnosed abnormal genital bleeding.
Warnings: Estrogen therapy should not be given to women with recurrent chronic mastitis or abnormal mammograms except, if in the opinion of the physician, it is warranted despite the possibility of aggravation of the mastitis or stimulation of undiagnosed estrogen-dependent neoplasia.

The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, retinal thrombosis, cerebral embolism and pulmonary embolism). If these occur or are suspected, estrogen therapy should be discontinued immediately.

Estrogens may be excreted in the mother's milk and an estrogenic effect upon the infant has been described. The long range effect on the nursing infant cannot be determined at this time.

Hypercalcemia may occur in as many as 15 percent of breast cancer patients with metastases, and this usually indicates progression of bone metastases. This occurrence depends neither on dose nor on immobilization. In the presence of progression of the cancer or hypercalcemia, estrogen administration should be stopped.

A statistically significant association has been reported between maternal ingestion of diethylstilbestrol during pregnancy and the occurrence of vaginal carcinoma in the offspring. This occurred with the use of diethylstilbestrol for the treatment of threatened abortion or high risk pregnancies. Whether or not such an association is applicable to all estrogens is not known at this time. In view of this finding, however, the use of any estrogen in pregnancy is not recommended.

Failure to control abnormal uterine bleeding or unexpected recurrence is an indication for curettage.
Precautions: As with all short acting estrogens, the following precautions should be observed:

A complete pretreatment physical examination should be performed with special reference to pelvic and breast examinations.

To avoid prolonged stimulation of the endometrium and breasts in climacteric or hypogonadal women, estrogens should be administered cyclically (3 week regimen with 1 week rest period—withdrawal bleeding may occur during rest period).

Because of individual variation in endogenous estrogen production, relative overdosage may occur which could cause undesirable effects such as abnormal or excessive uterine bleeding, mastodynia and edema.

Because of salt and water retention associated with estrogenic anabolic activity, estrogens should be used with caution in patients with epilepsy, migraine, asthma, cardiac, or renal disease.

If unexplained or excessive vaginal bleeding should occur, reexamination should be made for organic pathology.

Pre-existing uterine fibromyomata may increase in size while using estrogens; therefore, patients should be examined at regular intervals while receiving estrogenic therapy.

The pathologist should be advised of estrogen therapy when relevant specimens are submitted.

Because of their effects on epiphyseal closure, estrogens should be used judiciously in young patients in whom bone growth is incomplete.

Prolonged high dosages of estrogens will inhibit anterior pituitary functions. This should be borne in mind when treating patients in whom fertility is desired.

The age of the patient constitutes no absolute limiting factor, although treatment with estrogens may mask the onset of the climacteric.

Certain liver and endocrine function tests may be affected by exogenous estrogen administration. If test results are abnormal in a patient taking estrogen, they should be repeated after estrogen has been withdrawn for one cycle.
Adverse Reactions: The following adverse reactions have been reported associated with short acting estrogen administration:
nausea, vomiting, anorexia
gastrointestinal symptoms such as abdominal cramps and bloating
breakthrough bleeding, spotting, unusually heavy withdrawal bleeding (See DOSAGE AND ADMINISTRATION)
breast tenderness and enlargement
reactivation of endometriosis
possible diminution of lactation when given immediately postpartum
loss of libido and gynecomastia in males
edema
aggravation of migraine headaches
change in body weight (increase, decrease)
headache
allergic rash
hepatic cutaneous porphyria becoming manifest
Dosage and Administration: PREMARIN should be administered cyclically (3 weeks of daily estrogen and 1 week off) for all indications except selected cases of carcinoma and prevention of postpartum breast engorgement.

Menopausal Syndrome—1.25 mg. daily, cyclically. Adjust dosage upward or downward according to severity of symptoms and response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

If the patient has not menstruated within the last two months or more, cyclic administration is started arbitrarily. If the patient is menstruating, cyclic administration is started on day 5 of bleeding. If breakthrough bleeding (bleeding or spotting during estrogen therapy) occurs, increase estrogen dosage as needed to stop bleeding. In the following cycle, employ the dosage level used to stop breakthrough bleeding in the previous cycle. In subsequent cycles, the estrogen dosage is gradually reduced to the lowest level which will maintain the patient symptom-free.

Postmenopause—as a protective measure against estrogen deficiency-induced degenerative changes (*e.g.* osteoporosis, atrophic vaginitis, kraurosis vulvae)—0.3 mg. to 1.25 mg. daily and cyclically. Adjust dosage to lowest effective level.

Osteoporosis (to retard progression)—usual dosage 1.25 mg. daily and cyclically.

Senile Vaginitis, Kraurosis Vulvae with or without Pruritus—0.3 mg. to 1.25 mg. or more daily, depending upon the tissue response of the individual patient. Administer cyclically.
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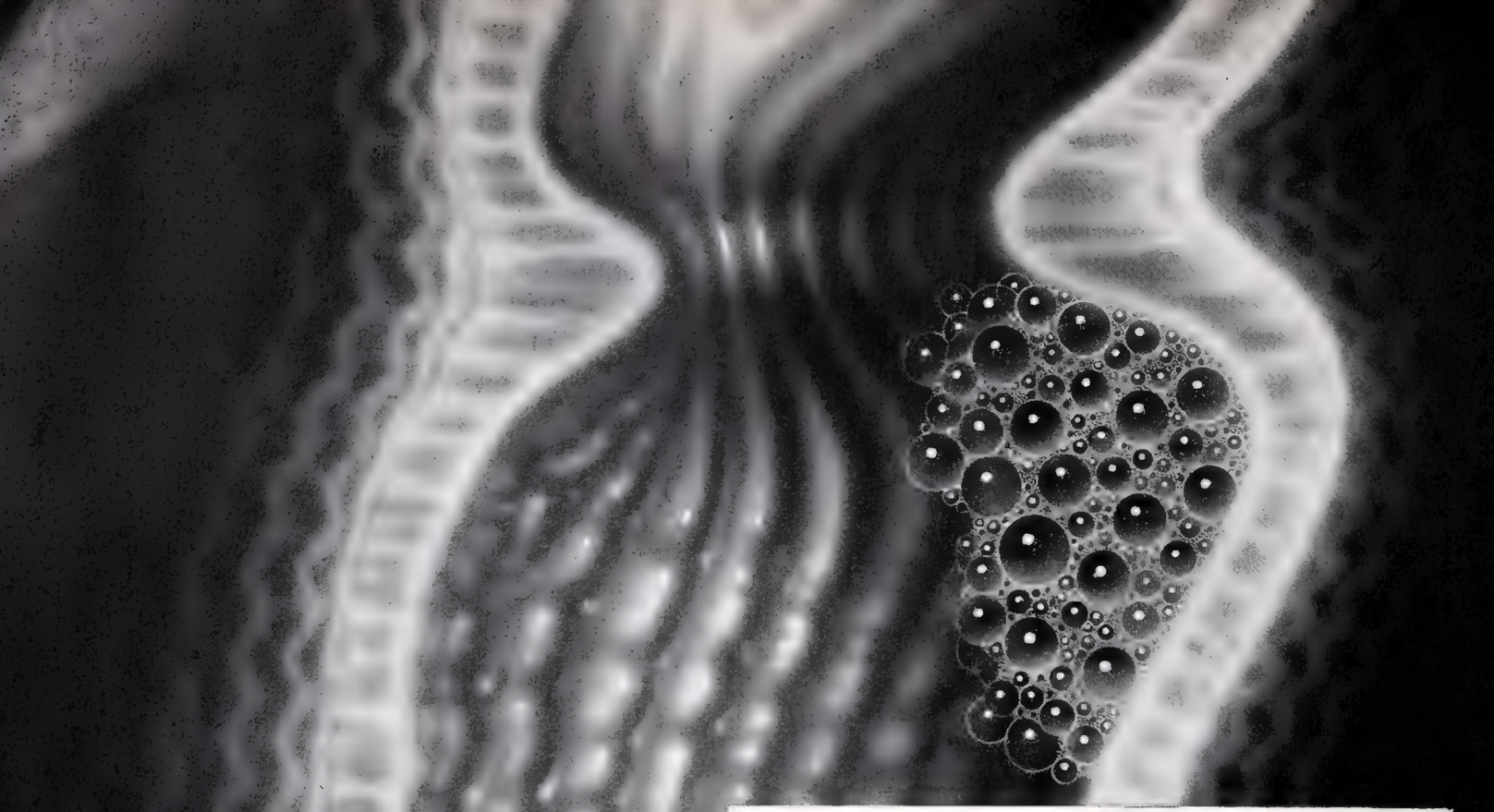

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CONTINUING EDUCATION COURSES

SEPTEMBER

General Medicine
Title: Fifth Family Medicine Review
Sponsor: University of Kentucky College of Medicine
Location: University of Kentucky Medical Center, Lexington
Date: Sept 15-21, 1974 and Oct 6-12, 1974
Fee: $195
Contact: Dr. Ronald D Hamilton, Director, Continuing Education, College of Medicine, University of Kentucky, Lexington, Ky 40506

Gynecology
Title: The Great Debates in Gynecological Endocrinology and Infertility
Sponsors: Dept of Obstetrics and Gynecology, Baylor College of Medicine, Houston
Location: Baylor College of Medicine, Houston
Date: Sept 20-21, 1974
Guest Speakers: Dr. Robert W Kistner, Dr. Nichols Vorys, Dr. Michael E Yannone, Dr. Joseph W Goldzieher, Dr. Richard P Dickey, Dr. Rudi Ansbacher, and Dr. George T Schneider
Fee: $50
Contact: Dr. Veasy C Buttram, Jr, Dept of Obstetrics and Gynecology, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Obstetrics and Gynecology
Title: Prostaglandins
Sponsors: UT Health Science Center at Houston; Baylor College of Medicine, Houston
Location:
Date: Sept 19, 1974
Contact: Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

Orthopedics
Title: Common Hand Problems Seen in Practice
Sponsors: Texas Tech University School of Medicine, Dept of Orthopedics
Location: The University Center, Texas Tech University, Lubbock
Date: Sept 12-13, 1974
Fee: $150
Enrollment: Maximum 100
Credit: 12 prescribed hours AAFP
Contact: Dr. Orene Peddicord, Coordinator, Continuing Education, Texas Tech University School of Medicine, PO Box 4569, Lubbock 79409

Psychiatry
Title: Helen Scott Saulsbury Lecture in Psychiatry—"Children and Child Rearing in America Today"
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Sept 27, 1974
Guest Speaker: Dr. Benjamin Spock
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

Surgery
Title: G V Brindley Lecture in Surgery
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Sept 3, 1974
Guest Speaker: Dr. William C Cantey, University of South Carolina
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

OCTOBER

Infectious Diseases
Title: From the Trench to the Bench—Clinical and Laboratory Aspects of Anaerobic Infections
Sponsor: UT Health Science Center at Houston, Baylor College of Medicine, UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston Association of Medical Microbiologists
Location: Houston
Date: Oct 17, 1974
Fee: $6
Contact: Office of the Director, UT Health Science Center at Houston, Division of Continuing Education, Box 20367, Houston 77025

Internal Medicine
Title: Medical Intensive Care Course #2
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Oct 10-Dec 13, 1974 (Each Thursday)
Fee: $150
Credit: 90 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Medicine and Surgery
Title: Annual Conference in Medicine and Surgery—"The Thyroid"
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Oct 19, 1974
Guest Speaker: Dr. George Crile, Cleveland, Ohio
Fee: $35

Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. W J Hardin, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

Obstetrics and Gynecology
Title: Recent Advances in Obstetrics and Gynecology
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Oct 25-26, 1974
Fee: $35
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

Ophthalmology and Otolaryngology
Title: Ophthalmology and Otolaryngology for Primary Care Physicians
Sponsors: San Antonio Ophthalmology and Otolaryngology Society
Location: UT Medical School at San Antonio
Date: Oct 18-19, 1974
Fee: $85
Credit: 12 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Psychiatry
Title: Folk Medicine in Mexico and Southwestern United States
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Oct 3, 1974
Fee: $15
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Radiology
Title: Radiology of the Gastrointestinal System
Sponsors: American College of Radiology
Location: Chicago
Date: Oct 18-20, 1974
Fee: $200 members and residents; $240 nonmembers
Credit: Category I, AMA Physician's Recognition Award
Contact: American College of Radiology, 6900 Wisconsin Ave, Chevy Chase, Md 20015

NOVEMBER

Obesity
Title: Obesity—Successful Management
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Nov 2, 1974
Fee: $40
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Diseases of the Vulva and Vagina
Sponsors: UT Health Science Center at Houston
Location: Houston
Date: Nov 6-8, 1974
Contact: Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

Title: Pediatric Ophthalmology Symposium
Sponsors: UT Medical School at Houston
Location: Hermann Hospital, Houston
Date: Nov 9, 1974
Fee: None
Credit: 8 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Malcolm Mazow, 1121 Hermann Professional Bldg, Houston 77025

Orthopedics
Title: Upper Extremity Trauma
Sponsors: American Academy of Orthopaedic Surgeons
Location: San Antonio Convention Center
Date: Nov 20-22, 1974
Fee: $150 physicians; $50 residents (with letter from chief)
Contact: Department of Continuing Education, American Academy of Orthopaedic Surgeons, 430 N Michigan Ave, Chicago 60611

Title: Urologic Pathology
Sponsors: Baylor College of Medicine, Dept of Pathology, Houston
Location: Baylor College of Medicine, Houston
Date: Nov 14, 1974-Jan 30, 1975
Fee: $300
Designed for: Urologists
Contact: Dr. Joyce S Davis, Associate Professor of Pathology, Baylor College of Medicine, Texas Medical Center, Houston 77025

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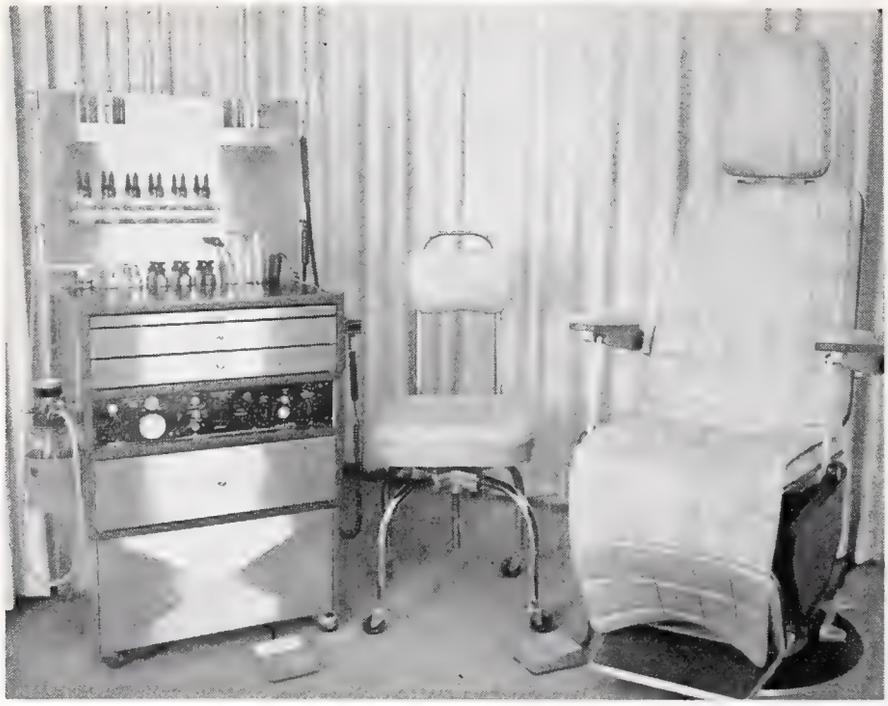

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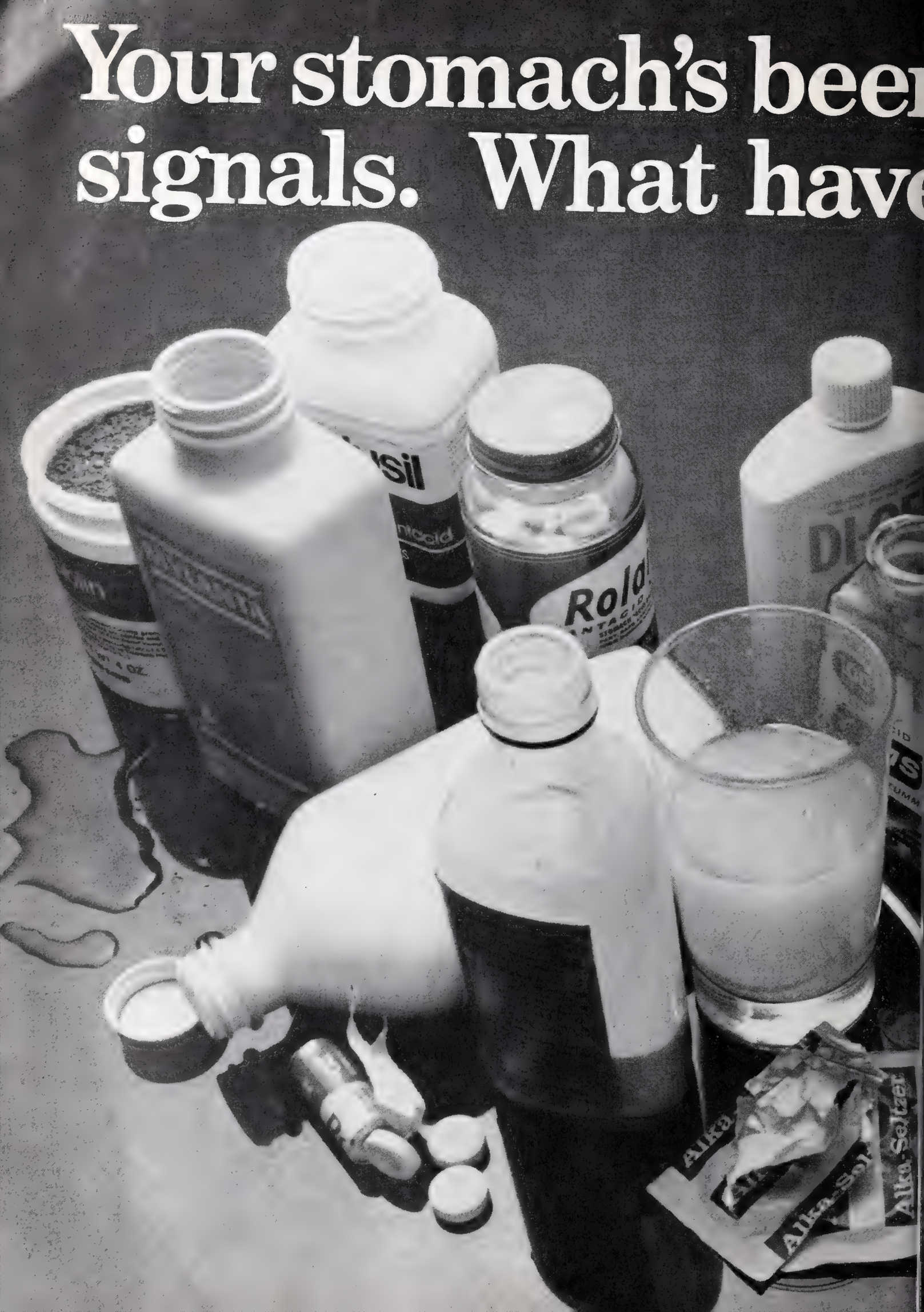
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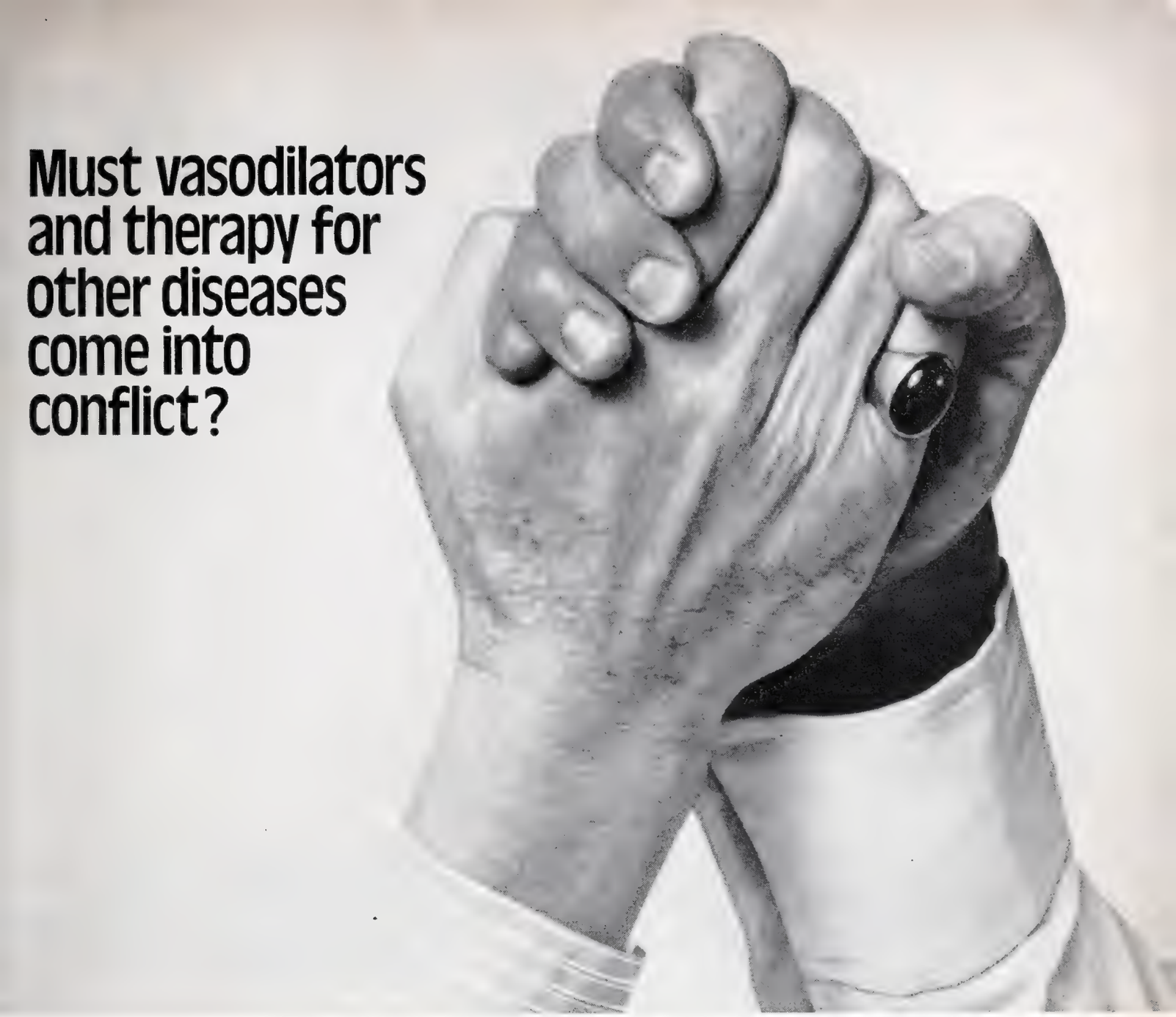

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The cerebral or peripheral vascular disease patient often has coexisting disease[1] which calls for another drug along with his vasodilator. It may be a hypoglycemic, miotic, antihypertensive, diuretic, anticoagulant, corticosteroid, or coronary vasodilator.

Vasodilan is not incompatible with any of these drugs—no treatment conflict has been reported. And, unlike other vasodilators, Vasodilan has not been reported to affect carbohydrate metabolism, liver function, or intraocular pressure—or to complicate treatment of diabetes, hypertension, peptic ulcer, glaucoma, or liver disease.

In fact, there are no known contraindications to the use of Vasodilan in recommended oral doses, other than that it should not be given in the presence of frank arterial bleeding or immediately postpartum.

1. Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

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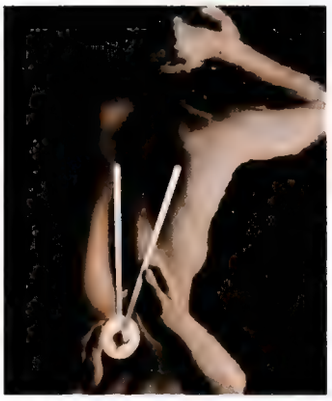

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Coronary heart disease rehabilitation

Clyde Fagg Sanford, III

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"Rehabilitation" has increasingly become an integral part of the concept of total patient care with regard to many disease and trauma processes. However, rehabilitation of coronary heart disease patients remains a subject of considerable debate. Heberden first noted the beneficial effects of exercise on coronary heart disease in 1772.[1] In 1776, Fothergill noted the importance of controlling diet and emotional stresses in patients with "syncope angina."[2] Later, in 1799, Parry stated that patients with "syncope angina" were benefited clinically by mild exercise.[3] In spite of these early proposals, comprehensive rehabilitation programs have only recently emerged as a viable alternative for victims of coronary heart disease. This article summarizes the contemporary rationale for such rehabilitation.

Exercise in Coronary Heart Disease Rehabilitation

The effects of exercise on the normal heart have been well documented. Mitchell and Blomqvist[4] have demonstrated the value of maximal oxygen uptake as an index of cardiovascular function. "Maximal oxygen uptake is the greatest amount of oxygen a person can take in during physical work and is a measure of his maximal capacity to transport oxygen to the tissues of the body. It is an index to maximal cardiovascular function, provided pulmonary function and ambient oxygen concentration are normal . . . Maximal oxygen uptake depends on maximal cardiac output and the arteriovenous oxygen difference of the body. The maximal cardiac output is, in turn, determined by the maximal heart rate and stroke volume, and the arteriovenous oxygen difference by the maximal oxygen content in arterial blood and the minimal oxygen content in mixed venous blood . . . Differences in body size, age, sex and habitual level of physical activity or physical conditioning account for much of the physiologic variation in maximal oxygen uptake . . . . Pathologic processes may depress maximal oxygen uptake by causing a rate-limiting block at any stage in the transfer of oxygen from ambient air to the cells."[4] Studies by Bruce et al,[5] have indicated that maximal oxygen uptake is significantly lower in coronary heart disease patients than in normal controls. A subnormal maximal cardiac output is the limiting mechanism in diseases affecting cardiac function, including coronary heart disease.

Studies by Saltin et al[6] on normal sedentary male subjects showed that exercise training led to a 33% increase in maximal oxygen uptake, with the increase due equally to an increase in the stroke volume and arteriovenous difference. Normal active males, with higher initial maximal oxygen uptake values, showed a lesser increase of 4% in maximal oxygen uptake, with the increase due primarily to increased stroke volume. No changes were observed in the relationship between cardiac output and oxygen uptake during submaximal exercise after training. No change in maximal heart rate was noted. However, in the previously sedentary subjects heart rate was lower and stroke volume higher for any given level of oxygen uptake after training. Frick[7] has shown that the decreased heart rate at submaximal work loads is due to decreased cardiac sympathetic activity.

The effects of exercise training on coronary heart disease patients are especially pertinent to the subject of this article. Detry et al[8] obtained the maximal oxygen uptake in 12 patients (six with angina and six without angina but with a previous history of myocardial infarction). Training increased the maximal oxygen uptake 30.6% in patients with angina and 17.7% in patients without angina but with a previous myocardial infarction. Of greater significance were the findings at submaximal exercise levels after training. These consisted of decreased cardiac output with an increased arteriovenous difference, an unchanged stroke volume, and lower heart rate and blood pressure. As a consequence, left ventricular work (as determined by a pressure-rate product) was lower after exercise training. Redwood et al[9] have shown that exercise training reduces the response of heart rate and arterial pressure to given levels of exercise. Studies by Clausen et al[10] on coronary heart disease patients in exercise training indicated that average cardiac output was unchanged by training, while stroke volume increased, heart rate, blood pressure and hence myocardial work (as assessed by a tension-time index) decreased. Clausen indicted peripheral factors regulating the distribution of blood flow as being responsible for these observed effects of training. A later study by Clausen et al[11] demonstrated decreased cardiac output at moderate work loads after exercise training in coronary heart disease patients. Clausen's peripheral factor theory was further elaborated in this paper. The consensus of these and other studies is that exercise training in coronary heart disease patients results in lower heart rate, arterial blood pressure, and left ventricular work at submaximal exercise levels. Other observations are debated. The involvement of peripheral versus central cardiac factors in determining these changes is open to question.

Sonnenblick et al[12] have summarized the determinants of myocardial oxygen consumption. Of primary importance are (1) intramyocardial tension, (2) heart rate, and (3) the contractile state of the heart. Less important but still significant determinants are (4) the basal metabolism of the myocardium, (5) the energy of activation of the heart, and (6) the energy associated with shortening against a load. Two factors determine myocardial oxygen supply: coronary blood flow, and myocardial arteriovenous difference. Cardiac muscle extracts almost all of the oxygen provided to it, so that even at rest the coronary arteriovenous difference is high. Increased myocardial oxygen demands are largely met by increased coronary flow. Holmberg et al[13] have shown that in patients with coronary heart disease, the resting values for coronary flow and coronary arteriovenous difference are comparable to those for normal subjects. However, during exercise the coronary disease patients show a significantly lower increase in coronary flow and a significantly greater increase in coronary arteriovenous difference than normal controls. Frick[14] showed that exercise training in normal subjects appeared to decrease myocardial oxygen demands at given exercise levels. Redwood et al[9] have presented evidence suggesting that exercise training in coronary disease patients may improve myocardial oxygen delivery. The question of whether exercise training increases myocardial oxygen delivery by increasing coronary collateral circulation in either normal or coronary heart disease subjects remains unresolved. Indeed, even the significance of coronary collateral circulation is debated.[14]

Gorlin[15] noted that angina pectoris is associated with myocardial ischemia. Ischemia may be precipitated by any factor disturbing the balance between myocardial oxygen supply and myocardial oxygen demand. The mechanism whereby ischemia produces angina is not known. Studies by Robinson[16] have shown that the onset of angina is determined by the work of the myocardium (as expressed by the pressure-rate product) and not necessarily by the work performed by the patient. The arterial pressure and heart rate which result from a given level of exercise are not fixed, but rather are determined by a number of variables, including emotional level and environmental temperature. Studies by Clausen et al[11] and Redwood et al[9] have indicated significantly increased time at given exercise levels until the development of angina in coronary heart disease patients who have participated in exercise training programs.

Exercise training of "normal" subjects has been shown to lead to decreases in plasma triglycerides, plasma cholesterol, and plasma insulin.[17-19] Bjorntrop et al[21] have observed similar effects in men exercising after myocardial infarction. The significance of these findings is unknown.[21]

Preliminary epidemiological data are beginning to indicate improved prognosis for coronary heart disease patients participating in exercise training. Work by Grant and Cohen[23] compared three patient groups: (1) patients with acute myocardial infarction who entered a rehabilitation program; (2) patients with acute myocardial infarction who were admitted concurrently with the first group but who did not enter a rehabilitation program; and (3) patients hospitalized with acute myocardial infarction one year prior to the study, and before the existence of the rehabilitation program. The groups were matched for age, sex, race, hospital status (private or service), and presence of complications sufficiently severe to prolong hospitalization. Group 1, the rehabilitation group, experienced significantly shorter hospitalization with objectively higher functional status at the time of discharge. Reichnitzer et al[24] reported a significantly lower incidence of cardiac death in documented myocardial infarction patients participating in a postcoronary exercise training program when compared to a matched group of patients not participating in the program. However, Kellermann[25] advises that caution be used in interpreting such findings, since numerous uncontrolled variables may have significance.

Mobilization and Activities in Coronary Heart Disease Rehabilitation

Increasing attention is being paid to variables other than exercise in coronary heart disease rehabilitation. DeBusk et al[26] and Goldstrom[27] have recently reviewed many of the negative aspects related to total bed rest for the coronary heart disease patient. Work by Saltin et al[6] also dealt with factors relating to the effects of bed rest. DeBusk prefaced his presentation by noting that the routine application of sophisticated cardiac monitoring equipment has in many instances increased the immobilization of the coronary patient. Negative factors associated with complete bed rest for the coronary patient have included increased work load on the heart due to increased venous return leading to increased stroke volume and increased cardiac output. Consequent reduced cardiac reserve has been noted. Increased evidence of orthostatic hypotension exists. Studies have noted increased use of the Valsalva maneuver while moving in bed causing

decreased venous return during the period of raised intrathoracic pressure, followed by a surge of venous return when the air is exhaled. This sudden surge has produced tachycardia, with documented instances of associated cardiac arrest. Increased danger of thrombus formation has been associated with bed rest, with many theories having been advanced to explain this association. Electrolyte and mineral balance changes have been demonstrated in bedridden patients, with the possibility of abnormal calcium and potassium levels being especially significant to the cardiac patient because of the effects of these minerals on cardiac irritability, conduction, and rhythm. Acid-base balance is affected by decreased respiratory movements limiting exchange of carbon dioxide and oxygen, resulting in tissue hypoxia and respiratory acidosis—a combination which can be associated with respiratory or cardiac failure. The act of breathing in a supine position in itself requires double the effort of equivalent breathing in an erect position. Constipation frequently occurs in the bedridden patient, due to the physiological and psychological problems associated with bedpans. Such constipation may lead the patient to expending considerable energy in an effort to pass a bulky stool. Even under balanced conditions, the bedpan requires more total energy expenditure than the bedside commode (including energy expanded in transferring to and from the bedside commode). DeBusk further made note of the psychological and physical debilitation associated with overly restricted convalescence for the coronary patients. Saltin et al[6] noted the detraining effect of prolonged bed rest. Both DeBusk and Goldstrom advocated immediate chair sitting for qualified coronary patients to counteract many of the preceding factors. Goldstrom emphasized the importance of a proper chair for the coronary patient: one providing good postural support with normal hip flexion, good head support, and full arm support.

In an effort to apply the physiological and clinical principles described above, numerous "graded" rehabilitative exercise programs have been devised.[23,26,28-30] The physiological goal of such programs is to achieve maximum exercise training effect with minimum risk of dangerous overexertion. Towards this end, the energy requirements of various common activities have been determined and tabulated. Controlled conditioning is achieved by integrating exercise with increasingly stressful activities of daily living. ECG monitoring, objective performance tests, and subjective reports (particularly concerning the onset of angina) are used to evaluate progress. Evidence is accumulating in favor of increasingly early controlled mobilization of the coronary heart disease patient.[26] Needlessly stressful activities and exercises are avoided in such programs. In particular, Mullins and Blomqvist[31] have found that isometric exercises are to be avoided, as these tend to produce potentially dangerous hypertension without concurrent cardiac training benefits.

Psychological and Socioeconomic Aspects of Coronary Heart Disease Rehabilitation

The psychological and socioeconomic aspects of coronary heart disease rehabilitation are receiving increasing attention. Naughton et al,[32] comparing patients in a cardiac rehabilitation program to similar patients not in the program, found that the rehabilitation program patients appeared to be less willing to live sedentary lives, and more adaptable to

psychosocial change. Hellerstein[33] observed similar objective and subjective psychological effects in cardiac patients participating in a rehabilitation program. Clausen et al[10] recognized the psychotherapeutic benefits of long-term management on coronary heart disease patients. In more elaborate psychosocial analyses, Torkelson et al[30] and McPherson et al[34] found almost uniformly positive effects as a consequence of participation in cardiac rehabilitation programs. These effects included improved objective and subjective psychological well-being, increased self-esteem, improved interpersonal relationships, and significantly reduced levels of anxiety. Hellerstein and Friedman[35] found that over 80% of post-coronary subjects can fulfill the physiologic demands of normal sexual activity without symptoms or evidence of significant strain. Participation in rehabilitation programs did improve the frequency and quality of post-coronary sexual activity—a finding perhaps in part accounted for by rehabilitation counseling dispelling fears concerning possible post-coronary sexual limitations. In the socioeconomic realm, Kellermann[5] reported that approximately 85% of coronary heart disease patients in a pool of patients not returning to work because of anginal pain, fear, medical misinformation, or psychological reasons, could indeed be returned to their normal employment after only four months in a comprehensive rehabilitation program.

Negative Aspects and Contraindications in Coronary Heart Disease Rehabilitation

Some studies have illustrated possible negative aspects of coronary heart disease rehabilitation programs. These have included reports of increased incidence of cardiac arrest among coronary patients in training. Tobis[36] summarized some of these negative possibilities in an editorial cautioning against overzealous exercise and rehabilitation programs for coronary patients. Many of the programs cited above have varying degrees of limitations on participation in cardiac rehabilitation programs. The National Workshop on Exercise in the Prevention, in the Evaluation, and in the Treatment of Heart Disease[37] summarized absolute and relative contraindications to exercise in coronary heart disease patients.

Conclusion

Rehabilitation is the process by which an individual is restored to and maintained at his optimum physiologic, psychological, social, and vocational status.[37] Physiological, psychological, and socioeconomic data are increasingly pointing towards the advisability of formalized cardiac rehabilitation. However, as in many other fields of rehabilitation, cardiac rehabilitation cannot be solely confined to a formal structure. The broader meaning of rehabilitation implies an ongoing process with success dependent upon the patient, his family, the health care team, and the society in which the patient lives.

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Complete heart block caused by secondary tumors of the heart

Case report and review of literature

David B. Redwine, MD

Tumors metastatic to the heart are not rare, but complete heart block due to heart metastasis is. There have been only 16 cases of complete atrioventricular block due to solid tumors metastasizing to the heart reported thus far.[1-16] In addition, there are several other reports of complete heart block due to leukemic infiltrates[17-19] as well as reports of lesser degrees of heart block resulting from solid tumor.[20,32] This article presents an additional case of complete heart block caused by cancer metastasizing to the heart, and discusses the subject as reported in the literature.

Case Report

A 38-year-old white woman was admitted to the Methodist Hospital on Jan 12, 1973, with a history of pain in the right upper quadrant of the abdomen for two months, syncopal episodes and dizziness related to exertion for one month, and dysphagia for two weeks. An upper gastrointestinal tract series six months prior to admission was normal and an electrogram at that time showed a slow heart rate but no other abnormalities. The dizziness was first precipitated by walking, and just prior to admission there was the onset of syncopal episodes lasting 10-15 seconds, with some jerking of the arms and legs but no urine or fecal incontinence. There was no history of a prior seizure disorder. During this time the patient often recorded her pulse at 34 to 40 beats/minute, and oral Isuprel was prescribed for her symptomatic bradycardia. Syncopal episodes and dizziness increased in frequency to the day of admission. Dysphagia was manifested by the sensation of solid foods sticking in the lower third of the esophagus. By the time of admission she was swallowing only liquids, but had experienced an increase in abdominal girth in the face of a 13.6 kg weight loss. Past medical history was unremarkable other than that she had smoked 1½ packs of cigarettes daily for years. There was no family history of cancer. The review of systems was unremarkable other than findings related to the present illness. On the afternoon of admission, an episode of asystole developed and responded to external massage with a rate of 28 beats/minute. A temporary transvenous pacemaker was inserted and the patient transferred to the intensive care unit. Physical examination at that time showed a pulse rate of 70/minute, blood pressure 160/90 mm Hg, and respirations 15/minute. The patient was obese. Examination of the heart and lungs showed no abnormalities. The abdominal examination showed tenderness in the right upper quadrant of the abdomen with a 10 x 10 cm tender, movable mass located 4 cm below the right costal margin lateral to the midclavicular line. There was no hepatosplenomegaly. There was pitting edema (2+) to the knees. Other results of the physical examination were unremarkable. Laboratory values on admission included hemoglobin, 10.8 gm/100 ml; hematocrit, 33%; white blood cell count, 9,500 with 85% neutrophils and 10% lymphocytes. The values for blood urea nitrogen, creatinine, and electrolytes, and results of liver function studies were normal on admission. A chest x-ray showed fullness of the mediastinal contour on the right at the aortic arch level. The day after admission, the right-upper-quadrant abdominal mass was gone and a liver/spleen scan was normal. Three days after admission, a permanent epicardial pacemaker was inserted through a median sternotomy. During surgery, large right hilar and paratracheal masses were seen as well as a

Complete heart block

Case No.	Date	Ante-mortem Diagnosis	Lesion	Treatment	Result
1	1924	Yes	Sarcoma of cheek		
2	1937	Yes	Adrenal neuroblastoma	None	Death 2 months after onset of symptoms and 4 days after onset of block
3	1940	Yes	Myeloblastoma of frontal bone	Mediastinal radiation	Death 14 months after onset of symptoms and 5 months after onset of block. Symptoms regressed and ECG returned to normal. Tumor cells found on pericardiocentesis
4	1941	Yes	Squamous carcinoma of bronchus	Digitalis, quinidine	Death 2½ months after onset of symptoms and 7 days after onset of block
5	1947	Yes	Reticulum cell sarcoma of stomach	Radiation to abdomen	Death 21 months after onset of symptoms and 3 days after onset of block. Mild clinical improvement with radiation.
6	1950		Bronchial carcinoma	None	Death 6 weeks after onset of symptoms
7	1950	Yes	Malignant melanoma of right axilla	Low-salt diet	Death 5 months after onset of symptoms and 4½ months after onset of block
8	1954	No	Bronchial carcinoma		
9	1954	No	Malignant melanoma of right thigh	None	Death 8 months after onset of symptoms and immediately after onset of block
10	1957	No	Squamous carcinoma of lung	Antibiotics	Death 2 months after onset of symptoms and 2 months after onset of block
11	1959	No	Reticulum cell sarcoma of leg	Digitalis	Death 2½ months after onset of symptoms and 5 weeks after onset of block
12	1961	Yes	Well-differentiated adenocarcinoma of lung	Nitrogen mustard, mediastinal radiation	Death 8 months after onset of symptoms and 6 weeks after onset of block. No change in ECG or clinically
13	1961	No	Hodgkin's	Thio-TEPA	Death 5 months after onset of symptoms and 5 months after onset of block
14	1962	No	Hypernephroma	"Chemotherapy"	Complete heart block present for 22 years. Death 11 months after onset of active symptoms
15	1968	No	Squamous cell carcinoma of buccal groove	Radium implants, mediastinal radiation, surgery	Death 16 months after onset of symptoms and 2 days after onset of block
16	1971		Bronchial carcinoma	Transvenous pacemaker	Death 7 weeks after onset of symptoms
17	1973	Yes	Moderately well differentiated adenocarcinoma of lung	Mediastinal radiation, epicardial pacemaker	No change in ECG. Gradually developed leg paralysis which responded somewhat to spine irradiation

1. Reported cases of complete heart block caused by cancer metastasizing to the heart.

mass infiltrating the atrioventricular groove. Biopsies revealed a moderately well differentiated adenocarcinoma. The pacemaker was inserted. The patient began receiving radiotherapy to the mediastinum on the 11th hospital day. There was no change in the ECG. Two weeks after admission, the sputum cytology was positive for adenocarcinoma. Four days later, paresis of the left leg and loss of voluntary bladder control as well as a positive Babinski sign on the left appeared. There was no sensory deficit. A myelogram on the 34th day was normal, as were the electroencephalogram, brain scan, and brain blood flow studies. A metastatic bone survey was negative. Electromyography suggested a lesion of the lumbar spine or lumbosacral plexus caused either by a hematoma or by metastasis. Radiotherapy was directed at the lumbar spine and the patient, minimally improved, was discharged on the 48th hospital day. By that time, the total bilirubin value was 2.1 mg/100 ml with a direct fraction of 1.0 mg/100 ml; the alkaline phosphatase was 432 IU, and SGOT 43 and SGPT 51 Karmen units, respectively.

Discussion

In the past, metastatic cancer of the heart has been of interest mainly to the pathologist at autopsy. This is because secondary tumors of the heart are usually insidious neoplasms, rarely giving rise to symptoms in life until late in the course of the malignant process. This paucity of cardiac symptoms attests both to the amazing capacity of the heart to operate with diminishing cardiac reserve as well as to the virulence of the primary cancer which may progress to cause death before cardiac symptoms develop. Fig 1 lists the known cases of complete heart block due to secondary tumors of the heart. Antemortem diagnosis was made in about half the cases.

Frequency of Metastases to the Heart

Fig 2 shows the frequency of autopsy-proven metastases to the heart by location

2. Frequency of autopsy-proved cardiac metastasis by location of primary tumor.[8,9,21-26]

Location of Selected* Primary Tumor	Total Number of Autopsies	Number Autopsies with Heart Metastasis	% with Heart Metastasis	Range of Reported Percentages
Malignant melanoma	129	63	49.3	25-100
Testicle	50	10	20	6-44
Lymphoma	97	15	15.4	12-20
Kidney	204	27	13.2	0-33
Lung	989	128	13.0	4-37
Pancreas	294	23	7.8	0-50
Breast	599	41	6.9	0-33
Bladder	141	7	4.9	0-9
Esophagus	389	16	4.1	0-25
Rectum	626	9	3	0-9
Leukemia	79	23	29	29
Total Nonleukemic	3,518	339	9.6	2-14

*Certain primary sites were not used in compiling this chart, thus the sums are different from the total of the addends of the last row.

of primary tumor. There is a wide range of frequencies reported for all types of metastasizing tumors. Malignant melanoma is consistently virulent, spreading to the heart in about half of all cases. Berge and Sievers have summarized the discussion on hematogenous spread to the heart.[26] In their series of autopsy reviews, left ventricular myocardium showed a higher percentage of metastases than the right ventricular myocardium. Thus, the point is made that the myocardial location of metastases can be ascribed to the relative size of the blood flow and the muscle mass in the two halves of the heart. This rule of blood flow holds only within individual organs, however, because the kidneys receive up to 25% of the total cardiac output, yet host metastases from only 9% of all metastasizing tumors. The adrenals, however, host the spread of 19% of all metastasizing tumors.

3. Frequency of complete heart block caused by secondary tumors of the heart according to description of primary location.

Location of Primary Tumor	No. of cases	%
Lung	7	41
Squamous	2	11.8
Adenocarcinoma	2	11.8
Type unknown	3	17.6
Reticulum cell sarcoma	2	11.8
Malignant melanoma	2	11.8
Hodgkin's	1	5.9
Sarcoma of cheek	1	5.9
Adrenal neuroblastoma	1	5.9
Squamous cell of oral cavity	1	5.9
Hypernephroma	1	5.9
Myeloblastoma	1	5.9

Frequency of Complete Heart Block Resulting from Metastases

Fig 3 shows that of 17 known cases of complete heart block, seven (41%) were due to spread from the lungs. This is a higher frequency of secondary cardiac involvement than the 13% indicated in Fig 2. This is somewhat to be expected, for the lungs virtually envelop the heart, and thus there is a much greater chance of local extension or infiltration than exists with any other cancer with a nonthoracic primary location. The spread of lung cancer by hematogenous and lymphatic routes is additive to and apparently less frequent than local extension from the lungs.[25] This means that a bulky invading tumor from the lung will have a better chance of involving the small septal area of the atrioventricular node than will hematogenous or lymphatic-borne metastases which seed the heart more in a chance fashion. This would explain, perhaps, why the incidence of heart block caused by lung cancer is higher than the incidence of cardiac involvement alone by lung cancer. Indeed, in the present case, it was felt at the time of surgery that local infiltration from the lung was the mechanism of cardiac involvement.

Effects of Therapy and Prognosis

Fig 4 shows that patients with secondary tumors of the heart and complete heart block apparently live longer, both after onset of their original symptoms as well as after onset of their heart block, if some form of antitumor therapy is applied. Other authors have written of cases showing dramatic clinical and electrocardiographic improvement following radiotherapy to heart metastases.[17-20] This increase in survival is probably related to some extent to the

Mode of Therapy	No.	Median Survival	
		After Onset of Symptoms	After Onset of AV Block
Radiotherapy, chemotherapy, or radiation implants	6	8.8 months	113 days
All other forms of therapy	6	3.1 months	41 days

4. Effects of therapy on median survival.

ECG Findings	No. Cases	% of All Cases
Low-voltage QRS	6*	35
ST-T wave changes	9	53

*The words "low voltage" were used to describe one ECG that was not reproduced.

5. Useful ECG findings in cases of complete heart block due to secondary tumors of the heart.

cell type involved as well as to real antineoplastic effects of the therapy used.

Antemortem Diagnosis

Several articles deal in depth with antemortem diagnosis of secondary neoplasms of the heart.[8,9,22,23,26,27,30] All authors agree that antemortem diagnosis is difficult. Certain clues and signs have emerged that may enable a clinician to make an antemortem diagnosis and thus initiate therapy which may prolong useful and symptom-free life. Thus, for example, atrial arrhythmias may suggest involvement of the pericardium, with resultant pericarditis and irritation of the sinoatrial node which lies near the epicardial surface of the left atrium.[27,31]

Hanfling gives a summary using tables of signs, symptoms, and diagnostic methods which might suggest involvement of the pericardium, epicardium, myocardium, endocardium, or cardiac chambers by metastatic cancer.[23] Yater[28] had done much the same earlier. Because of the continuum of signs and symptoms of secondary cancer of the heart, it is not practical to commit such lists to memory. It is sufficient to recognize that if a patient has a known neoplasm elsewhere and suddenly or gradually develops any changes in cardiac signs or symptoms, arrhythmias or radiographic changes in heart shape or size, then that change should be considered the result of metastasis to the heart until proven otherwise.

In the cases cited in this review of complete heart block due to cardiac metastases, even though heart block was present and clinically apparent by slow pulse rates of ECG, the diagnosis was not always made before death. It is not surprising that less obvious modes of manifestation are frequently overlooked, such as vena caval syndromes, mild congestive heart failure, new murmurs, and angina.[10]

Retrospectively in this study, the ECG was of occasional value. Fig 5 shows that only two generally useful ECG changes other than heart block were present. These were low-voltage QRS complexes and ST-T wave changes. Low-voltage QRS complexes were seen in one-third of the cases where the ECG or a description of it was available. Other common causes of low-voltage QRS complexes are diffuse coronary artery disease, myxedema, pericardial effusion, primary amyloidosis, emphysema, generalized edema, and obesity.[29] ST-T wave changes were seen in more than one-half the available ECG tracings or descriptions, but these changes are not specific enough to help diagnose cardiac involvement by malignancy. Other authors have called attention to alterations in QRS, P, and T wave morphologies,[22,26] atrial arrythmias, and pericarditis[23,27] as aids in diagnosis of pericardial involvement or myocardial involvement.

Conclusions

1. Myocardial metastases producing complete heart block are a rare late occurrence in malignancy.

2. If a patient known to have cancer has sudden or gradual cardiac changes detected clinically, electrocardiographically, or radiographically, the changes should be regarded as the result of metastasis to the heart until proven otherwise.

3. Patients with complete heart block due to secondary tumors of the heart live longer if antitumor therapy is used. This is probably in part due to particular cell types involved in the treated cases.

4. In the electrocardiographic evaluation

of a patient suspected of having secondary tumor of the heart, low-voltage QRS complexes are significant, as are any sudden or gradual ECG changes.

5. The frequency of complete heart block due to lung cancer is higher than expected, and is presumably due to the direct extension of the encroaching tumor mass rather than a hit or miss type of spread by the bloodstream or lymphatics.

Acknowledgement

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Fractures seen in a rural community hospital

Herbert T. Smith, MD

A three-year survey of fracture cases treated in a small rural hospital indicates that with the completion of a nursing home in the locale, patients have shorter hospitalizations for treatment of fractures. Since few young adults stay in small communities, physicians there see a greater proportion of femur fractures in elderly women than do their counterparts in urban areas. Another interesting figure is the high incidence of fractures resulting from falls in nursing homes. The contribution of osteoporosis cannot be overlooked, yet perhaps there are some safety measures—improvements or innovations—that could reduce the incidence of such injuries.

Fractures Included in Study

The study includes all fracture cases admitted to Fayette Memorial Hospital, La Grange, Texas, in cases involving multiple fractures and injuries for which the patients were transferred immediately to urban hospitals.

Incidence

There were 67 cases admitted in 1970, 96 in 1971, and 102 in 1972. Of these, 160 patients (60%) were females and 105 (40%) were males. One hundred and three patients (38%) were married, 87 (32%) were single, 70 (26%) were widowed, and 5 (1%) were divorced. The race of the patients was 80% white and 20% black, about the same as the racial distribution in the area served.

There were 254 cases of simple fractures (95.85%), with only 39 cases (14.72%) of comminuted fractures, 10 cases (3.77%) of compound fractures, and 10 cases (3.77%) of fractures with associated dislocations. (Some of the 265 patients had multiple fractures.) Fig 1 shows the incidence of fractures in various age groups. The rise in the 10 to 19 year age group probably reflects the increased mobility of this age group, together with contact sports, beginning use of motor vehicles, and other types of trauma.[2,3] The rise from age 60 to age 90, peaking between 80 and 90, reflects progressive infirmities with greater susceptibility to falls as well as decreased physical ability due to other medical diseases.[4]

1. Incidence of fractures by age groups.

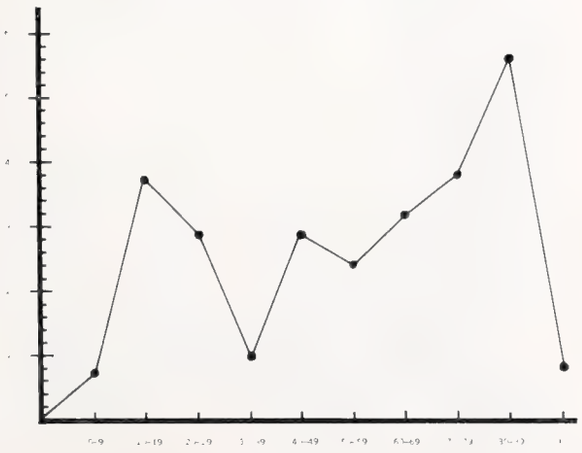


Fig 2 shows a high incidence of femur fracture, which is probably related to the number of females in the 60- to 90-year age group who have a much greater incidence of hip fracture due to osteoporosis.[4] The high incidence of rib fracture, we believe, reflects automobile and sports types of injuries. The relatively high incidence of vertebral fractures, which were primarily of the compression type, is due both to automobile accidents and spontaneous fractures in the elderly resulting from calcium absorption.

Causes

We thought that we would have a high incidence of fractures related to our area's

farming industry, but more than half (57.73%) of the patients in this study were injured in home falls and automobile accidents. This is the same pattern generally found in the United States. A special note, I think, should be made of the high incidence of fractures occurring in nursing homes; the number almost equals that of fractures from industrial accidents within this community (Fig 3).

Treatment

Of the 265 fracture patients admitted, 214 (80%) were treated at our local hospital, while 51 (19%) were treated temporarily and then transferred to other hospitals. Of these cases, 168 (63%) were treated by closed reduction, application of splint, or cast; and 36 (13%) were treated by open reduction followed by cast or other treatment. Ten cases (3%), primarily of vertebral fractures or undisplaced fractures in debilitated people, were treated medically.

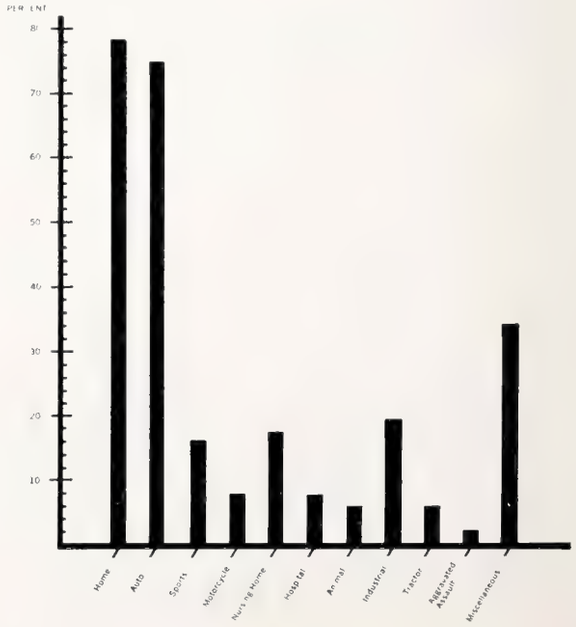
Complications

Even though 49% of the fracture cases were in the age group of 60 to 90, there were only seven deaths related to complications of these fracture cases. Of these, five (1.89%) were in the closed reduction treatment group while only two (.08%) were in the open reduction treatment group. This is an overall death rate of 1.97%—extremely low in view of the expected rate of complications in the higher age group. Because the most common open reduction was on femoral neck fractures in elderly females, it is felt that these statistics bear out the low mortality rate associated with open reduction in a high-risk group and that this treatment is preferable to that of the older "well-leg" traction and other types of closed reduction. Other complications included 13 cases of diabetes mellitus with, surprisingly, no deaths. There were two deaths from cardiovascular problems associated with the heart, two from infection, and three from strokes (one attributed to fat embolism).

2. Incidence of fractures by physical location.

Femur	53
Ribs	40
Vertebrae	35
Fibula	31
Radius	25
Tibia	24
Humerus	23
Pelvis	16
Clavicle	15
Ulna	12
Patella	9
Foot	8
Face	8
Nose	8
Hand	5
Skull	5
Scapula	3
Sternum	3
Elbow	2

3. Causes of fractures.



Other complications included four cases of ruptured urinary bladder in pelvic fractures, two cases of hemothorax, one case of pneumothorax in rib fractures, and two cases of nonunion of fractures in tibia/fibula injuries.

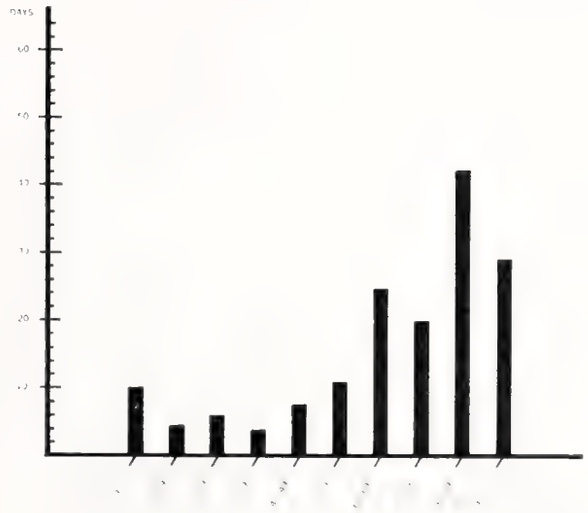
Comments on Analysis

There has been an average 11-12% annual rise in the incidence of fracture cases admitted to this local hospital.

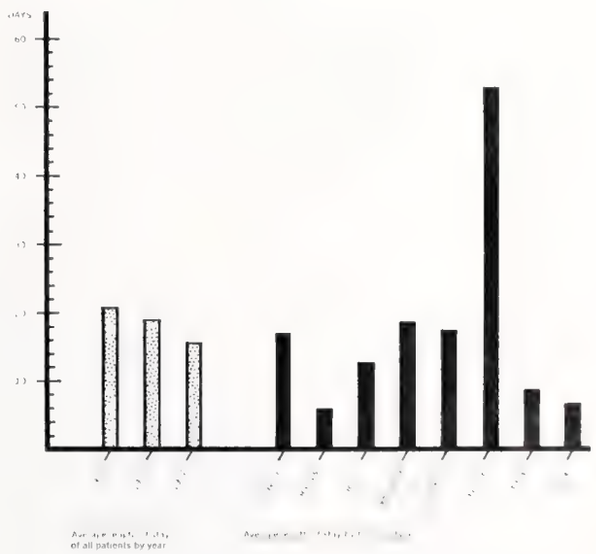
Fig 4 shows the length of stay in the hospital by age group. The total number of fracture cases for a given age group was divided by the total number of hospital days for that age group, giving the average length of stay for that age group. This is compared with the average length of stay for all hospital patients during this period 1970-72 (Fig 5). In the age group 0-59 the average number of days was 6.8 while that of the 60-90 group was 26.7.

Fig 5 also compares the average length of hospital stay for the commonest fractures. Each of the fractures chosen for comparison accounted for at least 5% of the fractures seen during this three-year period.

The longest length of stay, for fracture of the femur, was three times that of the next longest stay (for vertebral fractures). This is because so many femur fractures occur in the 60-80-year age group which also has a high rate of concomitant medical problems such as diabetes, cardiac and renal disease, and other morbidity. The length of stay for clavicular fractures was increased due to the high number of associated fractures in other parts of the body and because of open reduction on several of them. This also applies to rib fractures which, with an average stay of 11.8 days,



4. Average length of stay in hospital by age groups.



5. Average length of stay of all patients by years and by type of fracture.

also had a high incidence of either lung complications or other associated fractures.

The average length of stay for all types of fractures decreased by at least 25% in the three-year period, even though the total number of fracture days varied from year to year (Fig 5). The 1970 survey showed 1,345 total days of hospital stay or an average stay of 20.07 days. In 1971 there was a total of 1,747 days with an average length of stay of 18.09 days, and in 1972 there were 1,537 total fracture days with an average length of stay of 15.07 days in the hospital. Probably there are a number of reasons for the decrease. First, a new 100-bed nursing home was completed in 1970, providing an alternative extended-care facility for the area. In addition, we feel that the increased attention by the hospital's utilization review committee has contributed to this decrease.

Summary

We have presented an analysis of the incidence, type, and treatment of all fractures admitted to a 60-bed, rural community hospital during a three-year period. An attempt has been made to correlate the types of treatment with the types of fractures and length of stay in the hospital in the hope of improving treatment of fracture cases and decreasing morbidity and hospital time.

National safety surveys show that single people are more prone to injuries, especially fractures; however, in this community, married people have a higher incidence, probably because so few young single people stay in rural communities.

Attention should be given to the relatively high number of patients who sustain fractures while being cared for in nursing homes. We think that some study should be made of the safety devices (particularly those dealing with beds) used in nursing homes, to find the causes of falls resulting in fractures, and that some measures should be devised to prevent them.

We believe that the overall length of stay and the shortened morbidity in the 0 to 59 age group (between seven and nine days for all types of fractures) showed a remarkable improvement in the treatment of fractures during the past ten years. The length of stay for the 60 to 90 + age groups was approximately three and one-half weeks, which is not excessive considering the medical complications in these age groups. The stay of 42.14 days for the 80 to 89 group, in which the highest incidence of femur fracture occurs, is considerably shortened than the average of approximately 60 days in earlier years. In small communities, the biggest obstacle in shortening hospital stay is the lack of extended-care or nursing home facilities, since many of these patients have remained in the hospital simply because they have no one to give them limited nursing care and basic daily need care at home.

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ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon.

hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension and nonobstructing prostatic hypertrophy; hiatal hernia associated with reflux esophagitis, since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis).

The use of this drug in the presence of complication of biliary tract disease should not be relied upon.

Tachycardia should be thoroughly investigated before giving anticholinergic (atropine-like) drugs since they may increase the heart rate.

With overdosage, a curare-like action may occur.

Adverse Reactions. As with other anticholinergics, oxyphencyclimine HCl produces certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these.

Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis, dilatation of the pupil; cycloplegia, increased ocular tension; loss of taste; headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestation; some degree of mental confusion and/or excitement especially in elderly persons.

Decreased sweating is another adverse reaction that may occur. It should be noted that adrenergic innervation of the eccrine sweat glands on the palms and soles make complete control of sweating impossible. An end point of complete anhidrosis cannot occur because large doses of drug would be required, and this would produce severe side effects from parasympathetic paralysis.

Side effects which occasionally occur with hydroxyzine HCl (Atarax)® are drowsiness, xerostomia, and, at extremely high doses, involuntary motor activity, all of which may be controlled by reduction of the dosage or discontinuation of the medication.

Dosage and Administration. The recommended adult dose is usually one Enarax 5 or one Enarax 10 tablet two times a day or three times a day, depending on individual response. Proper diet and antacids should be used where indicated as concomitant therapy. The safe use of Enarax in children has not been established; therefore, the drug should not be used in children.

Drug Interactions. The potentiating action of hydroxyzine must be considered when the drug is used in combination with central nervous system depressants.

How Supplied. Enarax 5 is available as white scored tablets in bottles of 60. Enarax 10 is available as black and white scored tablets in bottles of 60.

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Nephrotic syndrome secondary to intrinsic renal disease

Gerald A. Beathard, MD

The nephrotic syndrome is most commonly caused by intrinsic renal disease. Some of these diseases have clinical pictures that are extremely similar or even indistinguishable, yet the prognoses and approaches to therapy may be quite different. This necessitates making an accurate morphological diagnosis in patients that present with the nephrotic syndrome and have no evidence of systemic disease.

Even though there are many causes of the nephrotic syndrome,[1] a limited number of diseases accounts for the majority of cases both in children and adults. Of these, approximately 80% of the cases in adults and more than 90% of those in children are caused by primary intrinsic renal diseases (Fig 1).[2] Even though the clinical appearance of several of these diseases is similar and at times indistinguishable, they often differ in their prognosis and to a certain extent, in the appropriate approach to their therapy. Thus, accurate diagnosis is important.

This article primarily reviews the morphology of the more important intrinsic renal diseases causing the nephrotic syndrome, emphasizing the prognostic implications that can be gained from accurately determining the morphology of the lesion that is present.

Lipoid Nephro is

The term "lipoid nephrosis" has been the subject of considerable semantic debate.[3] It originated as a term to describe a clinical condition of unknown etiology,[4] but some have suggested that "lipoid nephrosis" be discarded and replaced by other labels. These alternatives (nil disease, idiopathic nephrotic syndrome of childhood, foot process disease, minimal lesion disease) offer no improvement as far as indicating an understanding of the pathogenesis of the disease, and therefore have no real advantage over the older term. We use "lipoid nephrosis" to indicate those lesions in which no or only minimal changes are seen in the glomerulus by light microscopy, and in which no deposits can be seen by immunofluorescence or electron microscopy.

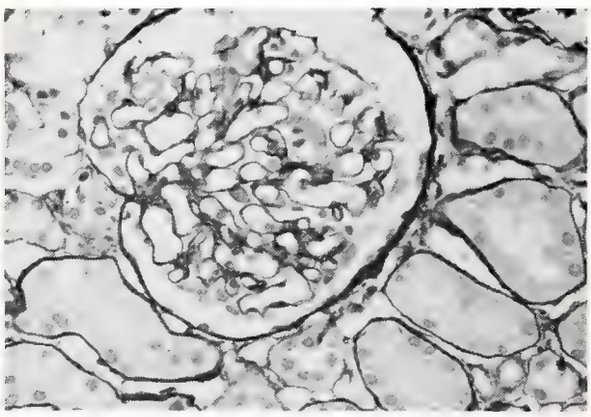
Clinically, patients with this disease have heavy proteinuria and generally demonstrate the clinical features of the nephrotic syndrome. It is characteristically seen as a "pure" nephrotic syndrome, being unassociated with hematuria, hypertension, or azotemia. The disease occurs primarily in children[1] but is also seen in adults.[2,5]

Typically, the glomeruli in these patients show no obvious abnormality by light or immunofluorescent microscopy. A minor alteration in glomerular morphology is seen by electron microscopy. This change, secondary to the heavy proteinuria associated with the disease, consists primarily of fusion of the foot processes of the epithelial cells (Fig 2).

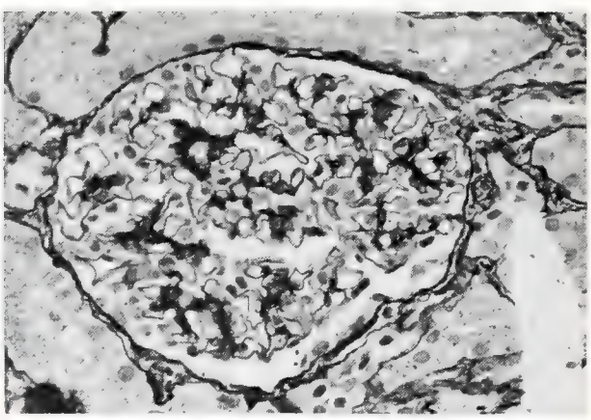
Not all patients presenting in this manner and having this disease show this lack

1. Intrinsic renal diseases causing the nephrotic syndrome.

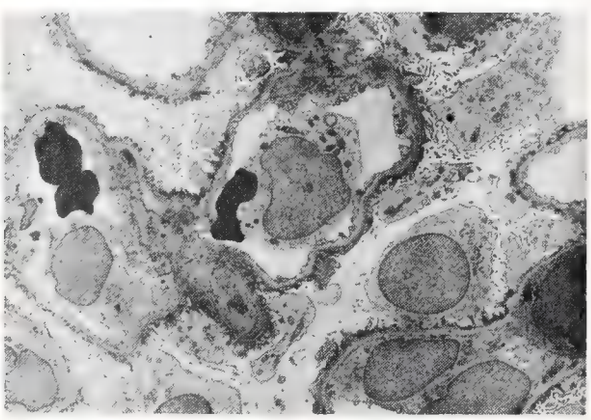
Lipoid nephrosis
Membranous glomerulonephritis
Focal glomerulosclerosis
Membranoproliferative glomerulonephritis
Mesangial proliferative glomerulonephritis
Acute proliferative glomerulonephritis
Rapidly progressive glomerulonephritis
Focal glomerulonephritis
Familial nephrotic syndrome



2a. Glomerulus from patient with lipoid nephrosis. This glomerulus shows no change and is essentially normal. PAM stain.



2b. Glomerulus from patient with lipoid nephrosis. This glomerulus shows a minimal degree of sclerosis of mesangial or centrilobular areas. PAM stain.



2c. Electron microscopic appearance of lipoid nephrosis. The epithelial cell foot processes are fused to form a continuous sheet of cytoplasm along the epithelial side of the glomerular capillary basement membrane.

of glomerular change by light microscopy. There are cases that show minimal mesangial sclerosis and/or hypercellularity. Results of immunofluorescent microscopy are negative in these patients, and similar changes are seen by electron microscopy (Fig 2).[6] These patients have a significant incidence of hematuria and/or mild hypertension in addition to the nephrotic syndrome.[6]

Patients with lipoid nephrosis generally have a good prognosis. This is especially true in children. In one study, 93% of the children and 85% of the adults responded to steroids with a complete loss of proteinuria within eight weeks.[7] In patients showing minimal degrees of mesangial change, the overall prognosis is not quite as good.[8]

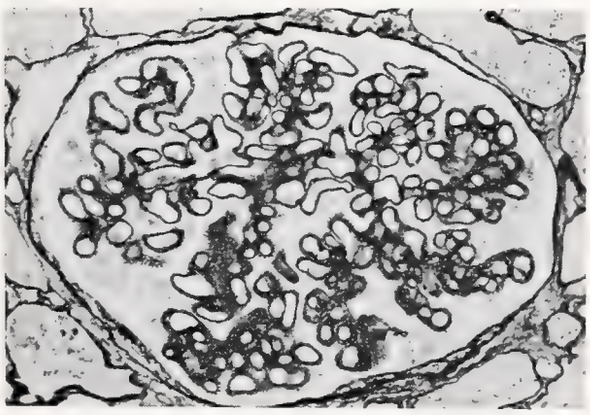
Membranous Glomerulonephritis

This disease may present clinically as a "pure" nephrotic syndrome, however, in at least 50% of the cases there is some degree of associated hematuria, hypertension, and/or azotemia. In one recently reported series of 32 patients, approximately 25% of the patients presented with hypertension and 50% presented with decreased renal function in addition to their proteinuria.[9]

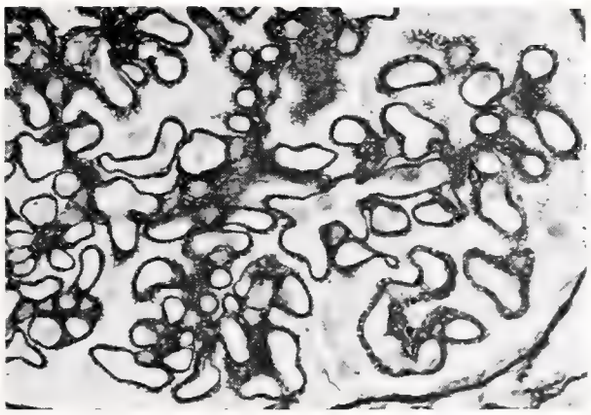
The pathogenesis of this disease is assumed to be mediated through antigen-antibody complex deposition within the glomerulus. The exact etiology is seldom identifiable; however, there are recent reports of this lesion occurring in patients with Australian antigen-positive hepatitis.[10]

The morphological appearance of this lesion is quite characteristic (Fig 3). The glomerular capillary walls are thickened, and with a silver stain the thickened capillary wall has a hairbrush appearance, with

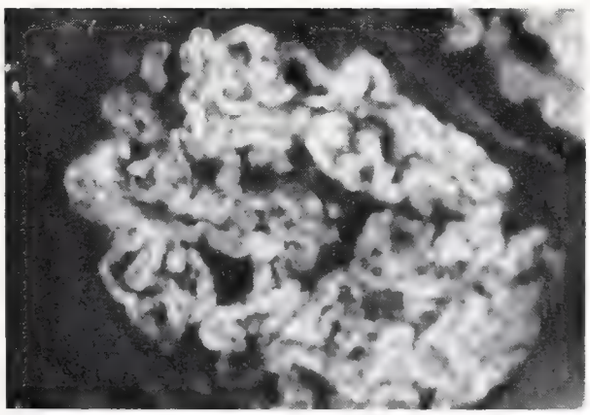
silver-positive projections extending outward. The capillary lumens are widely patent and only mild to moderate sclerosis generally is present. In cases of long standing, more severe sclerosis may be present. No increase in cellularity is present within the glomeruli. By immunofluorescence, a characteristic granular deposition of immunoglobulin having an almost confluent picture is seen along the course of the capillary wall. In our cases, IgG deposition has been present invariably. IgA, IgM and C3 also has been found in a significant number of cases. Electron microscopic examination of glomerulus reveals epithelial cell foot process fusion consistent with the degree of proteinuria that is present, and thickening of the glomerular capillary basement membrane. This basement membrane thickening is variable in degree but characteristic in appearance, having irregular projections and invaginations on the epithelial side of the basement membrane with granular amorphous deposits lying within the invaginated areas. In more chronic cases, the projections extending from the basement membrane appear to fuse over the areas containing deposits so that deposits become intramembranous. In these latter stages



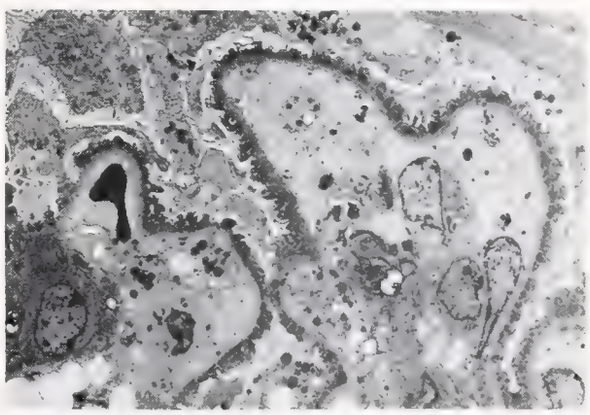
3a. Glomerulus from patient with membranous glomerulonephritis. The thickened glomerular capillary basement membrane has a "hairbrush" appearance. PAM stain.



3b. Portion of a glomerulus from a patient with membranous glomerulonephritis. This high-power view shows the "hairbrush" appearance of the basement membrane to a better advantage. PAM stain.



3c. Immunofluorescent appearance of membranous glomerulonephritis. Numerous granular deposits are seen outlining the glomerular capillary wall. These deposits in many areas are almost confluent.



3d. Electron microscopic appearance of membranous glomerulonephritis. Along the epithelial side of the basement membrane, irregular projections and invaginations of basement membrane material can be seen. Dense, dark deposits are present within these invaginations, lying between the projections.

some degree of resorption of the deposits may be evident.

The prognosis of this disease is somewhat variable as is seen in reported series.[9,11,12] In one recently reported series of 32 patients,[9] 12 patients had a relatively rapid course to uremia or death within five years of onset—the same occurred within three years in ten of the patients. A clinical remission was seen in only seven patients.

Focal Glomerulosclerosis

Most cases of focal glomerulosclerosis occur in the first four decades of life. There is a slight preponderance of males in most cases.[13,14] Although the lesion may occur at any age, including the first year of life, it appears to increase in incidence with increasing age. In one series, including patients ranging in age from 3 to 61 years, the mean age of onset was 25.5 years.[14] No preceding acute illness is usually apparent in these patients.[13]

Proteinuria, usually severe, has been an invariable clinical finding, and the nephrotic syndrome has been present in 65-75% of cases at the time of presentation.[13,15] Hematuria of some degree is a frequent accompanying clinical manifestation and hypertension has been reported in approximately one-third of cases.[16] The incidence of hypertension appears to be more frequent in older patients.[14] Azotemia is also present at the time of initial presentation in a significant number of patients and increases in incidence in older patients.[13,14]

The characteristic morphological feature of focal glomerular sclerosis is segmental sclerosis and/or hyalinosis of the glomerular tuft (Fig 4). This change spreads out from the hilar region of the glomerulus to the periphery of the affected segment. No accompanying increase in cellularity is seen, although contraction of this affected segment may suggest this appearance. Normal glomeruli as well as completely sclerosed glomeruli also may be seen in the biopsy. This lesion begins in the juxtamedullary glomeruli. For this reason, a renal biopsy that does not include some medullary tissue may fail to show this condition.

A second histopathological variant of focal glomerulosclerosis is the situation where the focally affected glomeruli have undergone obsolescent changes.[13] This variant, even though not showing typical segmental lesions, is similar in its clinical presentation and course. The only difference is that patients with focal glomerular obsolescence tend to have a lower incidence of hematuria, hypertension, and azotemia. Focal obsolescent glomeruli can occur in many conditions, and have significance only if more than 15-20% of glomeruli are affected.[13]

Most patients with focal glomerulosclerosis do not respond to therapy. The response rate to steroids or combined steroids and cytotoxic drugs is poor, ranging from less than 10% to approximately 25%.[13,15] The response rate is somewhat better in patients whose lesions are characterized by focal glomerular obsolescence than in those with the segmental form of this lesion. In patients who do not respond the prognosis is poor.

Patients with this disease can be divided into two groups, one with negative immunofluorescence and the other with positive immunofluorescence. The significance of this division is not clear since there does not appear to be any difference in the clinical presentation, progression, or prognosis between the two groups. Most series have not distinguished between those patients who show immunoglobulin deposition and those who do not.[13]

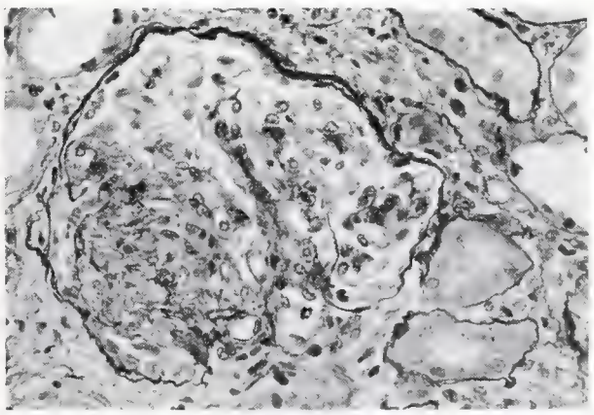
Membranoproliferative Glomerulonephritis

Recent studies have shown this disease to be present in 6-22% of patients presenting with evidence of glomerular disease or nephrotic syndrome.[17-19] A homogenous clinical picture is not seen in membranoproliferative glomerulonephritis. Patients may present with acute nephritis, microscopic or gross hematuria, asymptomatic proteinuria, or the nephrotic syndrome.[17] Of these, the nephrotic syndrome is the most common. This nephrotic syndrome is not the pure type seen with lipoid nephrosis, but is generally associated with other evidences of renal disease such as hematuria and azotemia. In one series of 105 cases,[17] at the time the patients were first seen the nephrotic syndrome was present in 67%, hematuria in 88%, azotemia in 31%, and hypertension in 25%.

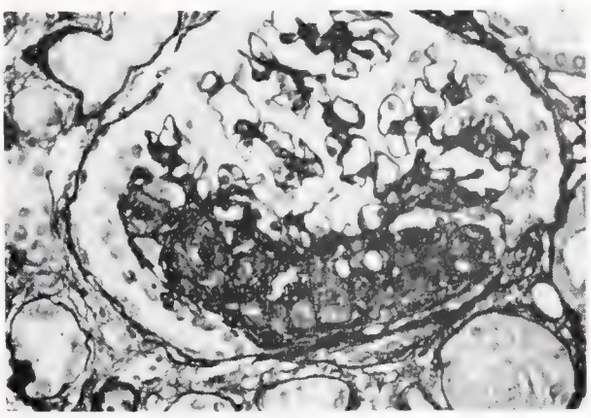
The disease has no sex predilection, but does occur primarily in children and young adults with 83% of the cases appearing after the age of eight years.

An interesting feature of the disease is that persistent hypocomplementemia occurs in approximately two-thirds of the cases. Unlike the hypocomplementemia seen in diseases such as acute proliferative glomerulonephritis and lupus nephritis, this decrease in serum complement level is persistent.[20] It may even persist after bilateral nephrectomy.[21] The exact mechanism of this hypocomplementemia is not completely clear, but appears to be related to activation of the complement system through the alternate pathway[22] and a serum factor referred to as the C3 nephritic factor,[23] which is invariably present in hypocomplementemic patients of this group.

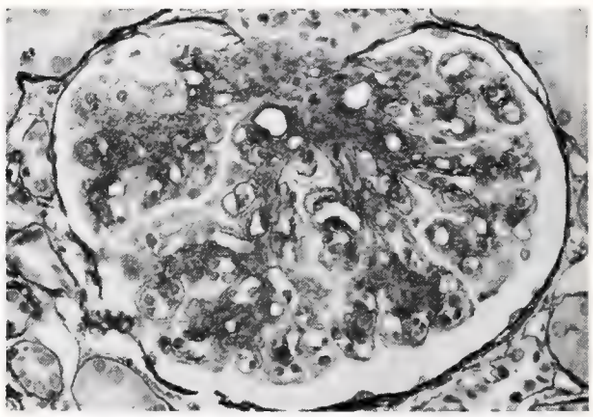
Morphologically, by light microscopy, the glomeruli of these patients show some degree of proliferation of the mesangial cells. This is associated with mesangial sclerosis which is variable in degree. The glomeruli of some patients have a lobular appearance (chronic lobular glomerulonephritis). With a silver stain, the morphological feature that enables one to make a clear-cut differentiation between membranoproliferative and other forms of glomerulonephritis is seen. This is a double contour or splitting of the capillary basement membrane into two elements (Fig 5). Immunofluorescent staining reveals predominantly complement, somewhat irregularly distributed along the



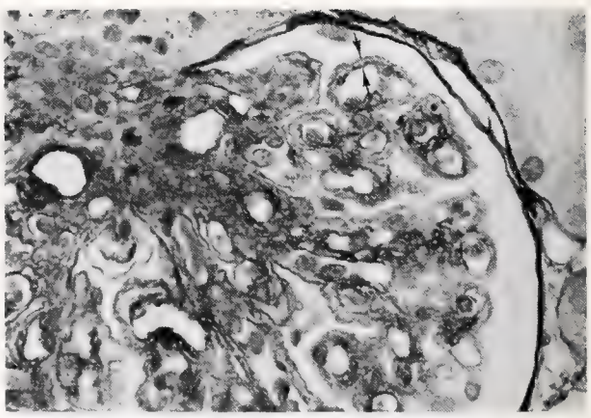
4a. Glomerulus from patient with focal glomerulosclerosis. This glomerulus shows an area of segmental sclerosis. PAM stain.



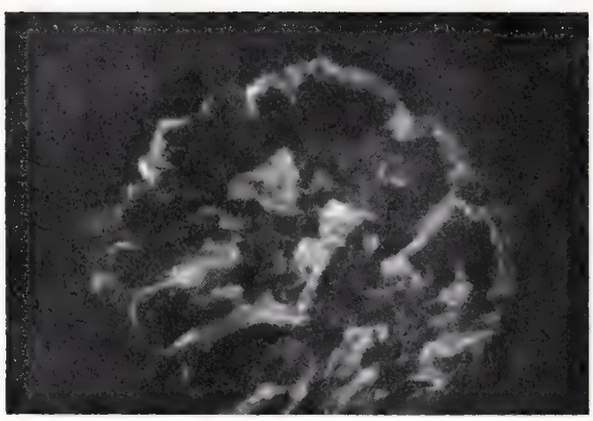
4b. Glomerulus from patient with focal glomerulosclerosis. This glomerulus shows an area of segmental hyalinosis. In the sclerotic area in the lower portion of the glomerulus, the light staining material filling the capillary loop having a hyaline appearance is the feature that characterizes this lesion.



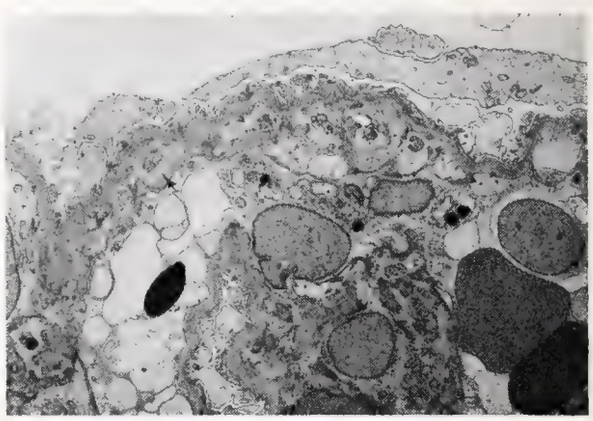
5a. Glomerulus from patient with membranoproliferative glomerulonephritis. This glomerulus has a lobular appearance. An increased number of mesangial cells is present, along with a moderate degree of mesangial sclerosis. The capillary walls show splitting of the basement membrane. PAM stain.



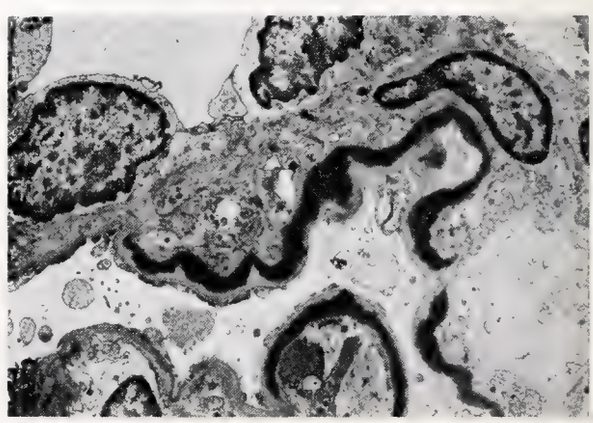
5b. Portion of glomerulus from patient with membranoproliferative glomerulonephritis. This high-power view of the glomerulus shows the split basement membrane (arrows) to better advantage. PAM stain.



5c. Immunofluorescent appearance of glomerulus from patient with membranoproliferative glomerulonephritis stained for the C3 nephritic factor. This shows the characteristic peripheral staining of the lobule with the central more sclerotic portion of the lobule not staining.



5d. Electron microscopic appearance of mesangiocapillary type of membranoproliferative glomerulonephritis. The basement membrane is split into two elements, and lying between the two elements (arrow) are cell processes from the mesangial cell.



5e. Electron microscopic appearance of dense deposit type of membranoproliferative glomerulonephritis. The basement membrane is again split into two elements, and lying between these elements is a very dense, black ribbon-like deposit.

capillaries and in the mesangium; in some cases the center of the lobule may show no staining. IgG, IgM, and fibrin are frequently found. By electron microscopy, these cases can be divided into two groups, both of which show a reduplication of the basement membrane with splitting into two elements. In one group, the two layers of basement membrane are separated by mesangial cell processes as well as deposits (mesangiocapillary type), while in the other group the two elements are separated by a dense, almost continuous deposit (dense deposit type) (Fig 5).

The prognosis in these patients is moderately poor. The annual mortality rate was 6.4% during the first ten years in one series, with one-third of the patients reaching an end-stage type of renal failure after follow-up of slightly more than five years.[17] The rate of progression in this disease appears to be slightly more gradual in children than in adults,[24] but there does not appear to be any difference in prognosis between those patients who are hypocomplementemic and those who are not.[25] The prognosis for patients with the dense deposit is slightly poorer than for those with mesangial capillary type.[26]

A review of the therapeutic response obtained with a variety of regimens in this disease including steroids with or without immunosuppressive drugs, shows that in general no benefit is obtained with treatment and the remission rate is as high in untreated as in treated patients. There is some suggestion, in fact, that the mortality may be greater in those patients that are treated.[17,27]

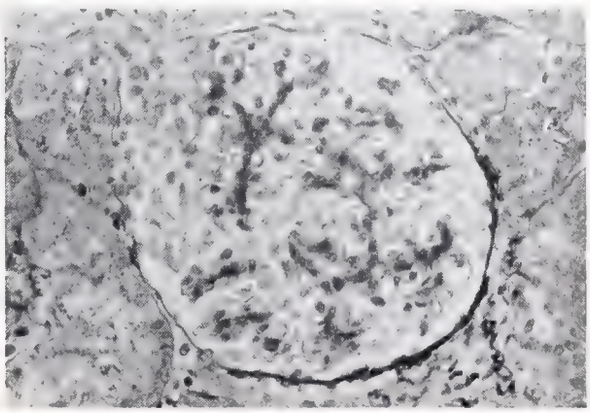
Mesangial Proliferative Glomerulopathy

This type of glomerular lesion is characterized by a proliferation of mesangial cells with a variable increase in mesangial matrix (Fig 6). No alterations in the glomerular capillary basement membrane are present.

This lesion may be seen in two different circumstances: as a sequela to acute glomerulonephritis, occasionally accompanied by the nephrotic syndrome, and in cases of idiopathic nephrotic syndrome.[8] In cases occurring as a sequela to acute glomerulonephritis, immunofluorescence and electron microscopy show deposits (Fig 6). These cases generally have a good prognosis. In one series of 55 patients, all recovered within three months to a year after onset.[8]

Patients with the clinical picture of idiopathic nephrotic syndrome have negative immunofluorescence and do not show deposits on electron microscopy. These patients have a much different prognosis. In one series of 25 patients,[8] most were resistant to steroids, and the disease had a chronic course. This is another example of patients presenting with a clinical picture indistinguishable from the minimal lesion type of lipoid nephrosis, but having a much more adverse prognosis.

6. Glomerulus from patient with mesangial proliferative glomerulonephritis. This glomerulus shows proliferation of just the mesangial cells. There is also a mild degree of sclerosis associated. PAM stain.



Acute Proliferative Glomerulonephritis

Acute proliferative glomerulonephritis generally occurs as a sequela to an infection with group A,β-hemolytic streptococcus, and is an infrequent cause of the nephrotic syndrome.[28,29] Since this disease in its uncomplicated form is characterized by proteinuria and edema, it is necessary to document proteinuria in excess of 3.5 gm/24 hr, and a serum albumin value of less than 2.5 gm/100 ml before concluding that the nephrotic syndrome is present in a patient with acute proliferative glomerulonephritis.

Morphologically, the glomeruli in these patients are extremely hypercellular. This increase in cellularity, often completely obliterating the capillary lumina, is a result of hyperplasia of the endothelial and mesangial changes as well as an infiltration by polymorphonuclear neutrophilic leukocytes (Fig 7). By immunofluorescence staining, a granular deposition of immunoglobulin of all classes, complement, and fibrinogen is seen with a diffuse distribution. By electron microscopy, rounded homogenous subepithelial deposits (humps) are seen along the glomerular capillary basement membranes. In some instances, polymorphonuclear neutrophilic leukocytes may be seen to lie in direct contact with the glomerular capillary basement membrane without intervening endothelium (Fig 7).

The development of the nephrotic syndrome in association with acute proliferative glomerulonephritis is thought to be associated with an increased incidence of progressive renal failure, and is one of the indications for therapy in these patients.[30]

Miscellaneous

The nephrotic syndrome occasionally may be caused by other intrinsic renal diseases such as rapidly progressive glomerulonephritis and focal glomerulonephritis. The association is an infrequent one and will not be discussed in detail. The nephrotic syndrome also may be familial. This is a rare condition occurring primarily in infants and young children.[31]

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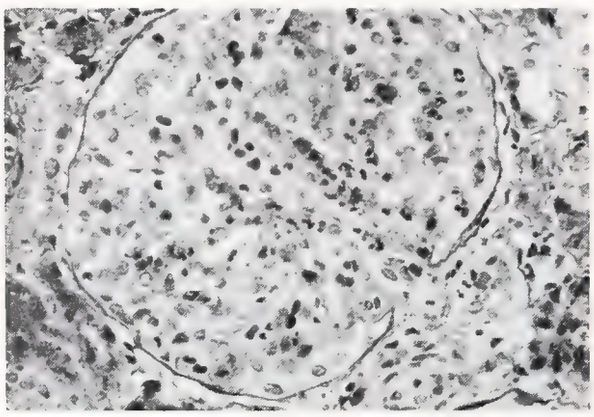
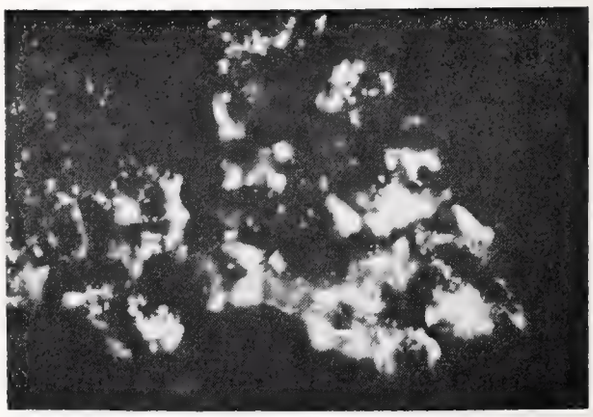


7a. Glomerulus from patient with acute proliferative glomerulonephritis. The increase in cellularity is diffuse in this glomerulus in contrast to Fig 6. Numerous polymorphonuclear neutrophilic leukocytes are also present. PAM stain.



7b. Immunofluorescent appearance of glomerulus from patient with acute glomerulonephritis stained for IgG. Note the diffuse granular appearance of the deposit.

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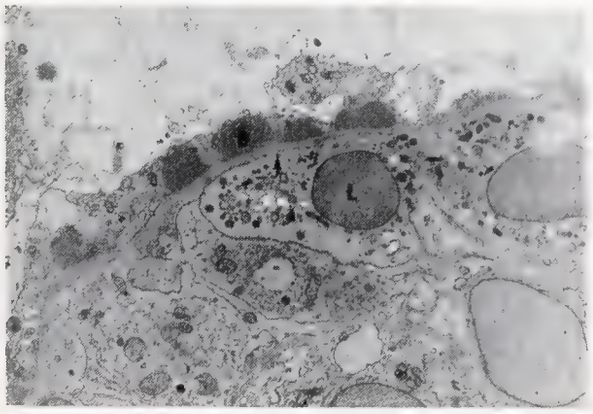

7c. Electron microscopic appearance of acute glomerulonephritis. Dense deposits (D) are present on the epithelial side of the basement membrane. These are rounded and homogenous in appearance. A polymorphonuclear leukocyte (L) is present on the endothelial side of the basement membrane and is in direct contact with the basement membrane (arrow) without any intervening endothelium.

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Increasing reading efficiency

Elizabeth A. Smith, PhD; Grant Taylor, MD

Reading is one of the major ways of obtaining information. Faced with heavy work schedules, unpredictable and irregular opportunities for reading, and the steadily increasing amount of medical literature, we must develop an efficient system which maximizes time spent in reading and increases comprehension and retention.

We all possess the ability to improve our reading skills. Our common goal is to be more efficient in our practice, and to increase our effectiveness in dealing with patient problems. First, we must be aware of factors which lower reading rates and decrease efficiency. Second, we must be motivated to analyze reading techniques and then determine whether we need to change our reading style. Third, we must be motivated to change or modify our techniques of reading.

This article discusses factors which influence reading rate, and suggests ways of increasing reading speed and reading effectiveness.

Reading Rate

Critical factors adversely influencing reading rate are faulty eye movements, tendency to vocalize silently, and inflexible reading style.

Although there are wide differences in individual reading rates, the average reading rate of well educated adults is about 250 words per minute.[1] Approximately 15% of the adults read 165 or fewer words per minute. The average speaking rate is about 160 words per minute. Therefore, these adults are reading at speeds which fail to exceed the rate of speech. There may be many physical and psychological reasons for these low reading rates. However, the factors most commonly considered to decrease reading rate are discussed here.

Faulty Eye Movements

The eye should move from left to right and observe the leftmost part of the word first. There should be a systematic, left-to-right progression across the line. The eye should move "by bounds," halting at successive vantage points to take in phrases, clauses, or even short sentences at a glance. The difference between rapid and slow reading is often due to the frequency and duration of such halts.

Silent Vocalizations

Slow readers often vocalize silently, or resort to "inner speech." When they read to themselves, they form letters with their lips. These silent vocalizations require a considerable amount of unconscious mental effort and also lower reading speed. Rapid readers reduce "inner speech" to a minimum, and readily translate the printed word into thought. The tendency to silently vocalize while reading should be overcome.

Flexible Reading Style

Because of different reading rates and highly individualized reading styles, it is necessary to develop a flexible reading style. The good reader adjusts his style of reading to suit the complexity and content of the material, and thus covers more ground with less "mental gasoline."

Reading styles commonly recognized by educators[2] are:

1. *Skimming* to obtain the general idea of an article, to find a reference, locate new material or answer questions.
2. *Rapid reading* to review familiar material or get information for temporary use.
3. *Normal reading* to note details, to solve a problem, or to read material of average difficulty.

4. *Careful reading* to study certain subject matter, to evaluate material, to get details in sequence, or to outline or summarize material.

Increasing Reading Rate

After brief periods of training, adults are often able to double their reading speed.[1,3] Reading rate may be increased by applying some of the following basic principles:

1. Cultivate the knack of shifting gears according to the character of the reading. Skim the unimportant portions of a text, and carefully read the important parts. The first law of skillful reading is merely an application of the law of relative importance. First perceive the total offerings of the printed matter, then go into details. Read wholes, not parts. Read sentences, not words. Read for the broadest meanings first, then for details later if necessary.

2. Do not take elaborate notes while you read, as this is an inefficient habit. Read first, and then reflect. If you do not clearly retain the gist of what you have read, go back over the material and take notes on the things you have failed to remember. Do not stop reading to copy valuable material. Make a mark in the margin of the page and come back to it after you have finished reading, and then copy it. Underlining important statements as you read is a good practice. Then you can refer to these statements later and you will also have saved the time required to take and classify notes.

3. Read straight ahead. Do not stop unless you lose the main line of thought. Never mind the obscurity of details.

4. Try to minimize the number of stops or eye fixations in each line. Establish a regular rhythm of eye movements adapted to the length of the line and the subject matter you are reading. Do not allow the eye to break its forward sweep by wandering back in retrogressive movements to pick up something you think you have missed.

5. Force yourself to read more rapidly than feels comfortable. You will be bothered at first by not grasping the subject matter as well as you feel you should, but speed will increase with practice.

6. When reading, give careful consideration to such factors as posture, illumination, ventilation of the room, presence of conditions which may distract, and the condition of the mind and body. Your mind will not be in a receptive mood immediately after a heavy meal, or if your body is fatigued. Periods of reading or study should be alternated with periods of mental and physical relaxation or with periods of outdoor physical exercise.

Increasing Reading Effectiveness

An analytical or problem-oriented approach exhibited daily in the practice of medicine can be applied to the reading of medical literature. Such a scientific approach is designed to reinforce the skills of critical thinking, or problem solving.[4] If certain of the following proposed methods can be applied to your current reading techniques, reading effectiveness should be enhanced. However, the methods you are already using, or may develop through experimentation, may be preferable to this system. This system, which is presented only as a guide, is most appropriate for the reading of medical journals.

1. Select journals containing information which will answer the majority of important patient problems you are dealing with. The number of journals read regularly may range from three to ten.

2. Carefully study the format and content

of each journal read until you develop a system for reading articles differing in content and complexity. At first, you may wish to write brief notes on these procedures. However, with periods of practice, you will soon commit this system to memory, and it will become an integral part of your reading style.

3. Select relevant articles from the table of contents. Assign a priority to each article. Read the most important article first.

4. Read the summary if there is one, and/or read the first paragraph of the article and the first and last sentences of each paragraph. These sections contain the majority of the factual information. *Patient Care,* for example, has express stops.

5. Spend enough time examining figures and tables so that you can interpret them and also make conclusions based on the data.

6. Scan the article, and underline important parts or make notes in the margins.

7. When you have finished reading the article, reread underlined material and/or notes.

8. Make notes on index cards using any intelligible technique. Such notes, when filed under area of interest or content, make excellent references, or serve as an outline of the article. This reference file may also serve as a data base of patient problems. Index cards can be color coded according to journal title or content area.

9. Make a mental outline of relevant information. Contrast this new information with what you already know, and assimilate it into your store of knowledge.

10. Commit to memory facts and concepts appropriate to your needs.

11. After you have read an article, analyze the procedures used and eliminate from your own system or from this basic system any steps unnecessary to your effective reading.

If you commonly clip important articles from journals, you may wish to file them by subject. The current *Index Medicus* list of subject headings is available from The Superintendent of Documents, Government Printing Office, Washington, DC 20402. This listing costs $5.50.

Possible solutions to the reading dilemma faced by the physician have recently been published.[5] A system of identifying continuing education needs and tying journal reading to this system has been proposed.[6] This system outlines a method of using patient problems as the main guide to reading.

The system proposed by Schmidt, Castle, and Wilson[3] presents guides for the systematic selection of journals which meet the daily demands of practice and enhance clinical skills. These authors describe how the general principles for improving reading speed and comprehension can be applied to reading the *Journal of the American Medical Association, Emergency Medicine, Family Physician,* and *Patient Care.*

One valuable reference which will not only guide your reading but also serve as an excellent resource is the "Bibliography of Medical Reviews." This bibliography, which has both a subject and an author index, is published in each monthly issue of *Index Medicus.* Only articles which are defined by the National Library of Medicine as being well documented surveys of the recent biomedical literature are included. The 1966-1970 listings can be obtained from The Superintendent of Documents for $6.75.

The mental discipline and dedication to study which permeated our formal education can be revitalized and applied to reading. It is definitely possible to increase

reading rate and reading efficiency. Just as working long hours, or engaging in our favorite activity such as jogging, golfing, or sailing has become a habit, reading may similarly become a very constructive and professionally rewarding habit.

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GRO with continuing education

Vilma T. Falck, PhD; H. Grant Taylor, MD

One of the most important features of programs which have been funded by the Regional Medical Program of Texas has been the encouragement for local communities to take responsibility for themselves, both fiscally and organizationally. Project GRO, a grass roots organizational support system, is an example of that kind of success.

Although some congressional and health leaders have criticized HEW regulations which have required programs to include plans assuring that they can ultimately become financially self-sustaining, this may have been the very feature which enabled some worthwhile programs to survive when funds were suddenly withdrawn.

In addition to the provision for eventual local funding, Project GRO had another characteristic which helped to assure its success. Project GRO encouraged the development of cooperating groups of community health agencies within each region (Fig 1).

Each participating hospital (in some instances a nursing home) was represented by a physician, director of nursing, and an administrator. Through the locally recruited and hired coordinator of health services education, the organization of professionals (Councils of Health Resources) developed its own policies and procedures to meet locally identified needs.

Regional Facilities

In all regions the Council members were representatives of relatively small health agencies. The largest hospital in any of the regions contained 137 beds. The average hospital in that region had 52 beds. In a second region, the largest hospital had 100 beds, while each of the other nine hospitals was less than 40-bed size, with seven of the nine less than 30 beds.

Many of these small hospitals have been faced with the prospect of closing down if certification is lost. Some are classified as 7-C by the Medicare program, indicating some serious facility or staffing deficiencies which raise questions concerning their ability to provide patients with high-quality medical care.

The Councils of Health Resources representing these threatened hospitals were highly motivated to demonstrate their ability to provide excellent service to their communities. Project GRO has provided them a structure for cooperative efforts to secure professional staff and to develop appropriate continuing education programs, creating opportunities for shared responsibilities and services. Council members did not attempt to match their facilities with those in large, urban, highly complex medical centers, but rather to emphasize the strengths inherent in being an integral part of a small community while attempting to overcome the weaknesses which have tended to accompany this "rural" aspect.

Formula for Success

Project GRO enabled groups of small health agencies to work together to find solutions for their problems. The common denominator for successful efforts proved to be the coordinator of health services education, who served as a catalyst and facilitator for program development as well as the liaison between central resource institutions and the local agencies. In each successful Project, a local person, an experienced registered nurse who knew the communities involved, was enthusiastic about the potential of the program, and was known or widely accepted by a number of the local Council members, was hired.

There was no formal requisite for advance training in educational methodology, public health, management, or public relations. Guidance in these areas, if needed, was available as part of the Project from central resources. Everyone involved in the Project agreed it was most important that the coordinator be one with first-hand experience in the difficulties faced by small hospitals.

Another factor contributing to the adequacy of program development was the formation of close knit, similar interest groups. The administrators of small hospitals met together; shared lunch, mutual interests, and concerns. Organization of people with similar problems occurred among the directors of nurses. Gradually many levels of health personnel from a wide geographical area began to meet together. In one region, the laboratory staff became so enthusiastic about their shared opportunities for continuing educational programs that they unanimously voted to meet for a blood banking conference on a Sunday, the day off for most persons, in order to insure the greatest possible participation but in their words, "So no one has to miss it."

Continuing education, as was intended, proved the spark and vehicle for cooperative development. Administrators are just now beginning to consider other cooperative advantages such as joint purchasing possibilities, standardization of forms, shared staffing and even joint accreditation possibilities. Special educational programs shared by all personnel have already served to present guidelines for medical records, nursing care and emergency care plans, management and supervision techniques, policies, and procedures. Workshops, seminars, and conferences presented by consultants from leading central resource institutions in Texas (eg, medical schools, major urban hospitals, the US Army and Texas State Department of Health) have ranged from problem-oriented records to geriatric care and from utilization review to coronary care.

1. Project GRO areas in Texas.

More than 4,000 health professionals had learned new skills in 93 workshops and other types of educational sessions at the end of the first operational year (September 1972). A total of 86 programs with more than 3,000 participants have been held in the West Cross Timbers area alone, an area with 893 health professionals including all levels in 11 hospitals and 10 nursing homes. This area of approximately 80,000 people in West Central Texas is characterized by its farming and ranching, with a high proportion of the population being older persons. The over-65 group requires four times as much hospital care as the remainder of the population.

Mrs. Verna Hancock, RN, coordinator of health services education for this Council, organized continuing education programs in all areas of medicine and health, but focused attention on response to the need for health services for this population. In

addition to conferences on geriatric care held each week, cooperation with the local college is facilitating the development of studies in gerontology. These offerings are directed to all levels of professional health personnel, registered college students, and members of the community. Community interest has been stimulated to the degree that special programs other than in the health service area are being initiated for the aging members of their society.

All regions have emphasized the development of a variety of continuing education opportunities. Learning resource centers are being established in each health agency, sometimes doubling with other areas such as the doctors' lounge, the lunch room or library. The learning resource centers are being provided with audio cassette players, screens, film strips, slide projectors, etc, sometimes in a permanent placement, other times on a rotational arrangement with other hospitals. Provision is made for individual and group study of instructional materials purchased for use in all of the participating health agencies. Telephone dial-access consultation (in cancer) is available in all areas through a special project of The University of Texas M. D. Anderson Hospital and Tumor Institute. Access for consultation in other specialty areas may soon become possible via telephone, and ultimately with more sophisticated channels as statewide network communication patterns develop.

Affiliation of each Council with its local university or college is helping to assure high-quality educational programs in order to meet standards set and encouraged by participating local faculties who serve as consultants and, when appropriate, instructional personnel. Such cooperative arrangements with the local educational institutions should have long-range spin-off benefits such as improving the interfacing between work and study environments and creating career ladders for health personnel. In the meantime and of more immediate benefit, affiliation with the local university provides recognition for health personnel, who receive standardized and nationally recognized continuing education units for the hours they are involved with educational experiences.

Summary

There has been a wide range of direct and indirect benefits for many small communities of Texas as a result of their bootstrap efforts to improve patient care via cooperative sharing and coordinated activities primarily in continuing education. These community efforts are improving the quality of health care delivery, creating a professional climate in small hospitals which can provide stimulation and challenge to the small-town practitioner who has the ultimate responsibility for maintaining the health of the community. These improvements may prove to be more useful in attracting competent health professionals to small communities, including family physicians, than will government doles, scholarships, preceptorships, or the lure of guaranteed levels of income. Programs which attract, which pull rather than push, may be the most effective ways to encourage young men and women to enter rural practice. Project GRO has been an example of how an initially federally funded program can stimulate local effort without smothering it.

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Dr. Falck is under contract with the Regional Medical Program of Texas as director of educational programs.

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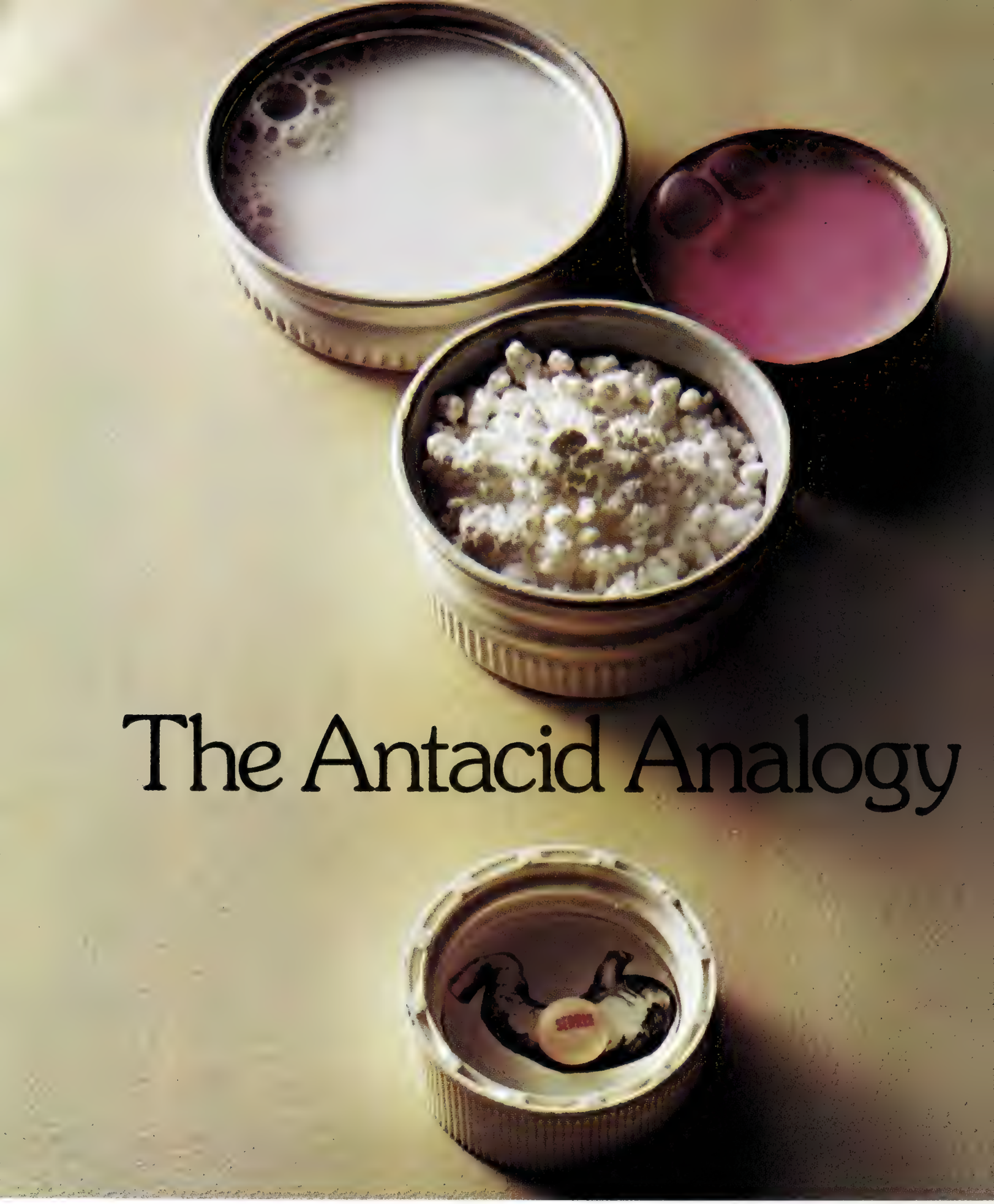

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*Innes, I. R., and Nickerson, M., in Goodman, L. S., and Gilman, A. (editors): The Pharmacological Basis of Therapeutics, ed. 4, New York, The Macmillan Company, 1970, p. 537.

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Opinion & Dialogue

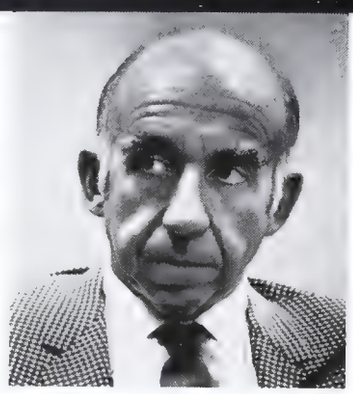
The Role of the Detail Man

Dr. Willard Gobbell
Family Physician
Encino, California

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealing with health problems in this country there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihoo on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in this

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.,* the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

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Is TMA a scientific group? You bet!

When US postal officials asked the Texas Medical Association last spring to explain and document the reasons why it should be allowed to continue using its third-class, nonprofit, bulk mailing permit, staff members quickly filled a whole file drawer with qualifying information and exhibits.

TMA's appeal for continued use of that permit was granted, for there could be no doubt that the Association is a nonprofit scientific organization and therefore entitled to the special postal rates.

Basic to the Association's status is its long-recognized primary objective: "To provide the best medical care possible for all Texans. The Association continually should strive to foster and encourage those programs and activities which will enable physicians to render the highest quality of medical care possible to their patients. This can be accomplished by extending medical knowledge, by advancing medical science, and by providing opportunities and information related to continuing medical education."

Backing up this formal statement is an impressive collection of services, programs, and activities related to scientific aspects of medicine and education.

Scientific journal

The Texas Medical Association has published a scientific journal since 1905. Currently *Texas Medicine* is distributed to all members of the Association plus some independent subscribers, and its primary purpose is to publish scientific information useful to practicing physicians. Its scientific articles are selected by the Scientific Publication Committee (see the contents page for their names) assisted by some 350 specialized consultants throughout the state.

Physicians who want to get the particulars on forthcoming medical and specialty society meetings can look in the "Coming Meetings" section of *Texas Medicine*, which carries the date and place of meetings and the name and address of someone to contact for more details. Likewise, those who want to keep up with new advances in medicine can check the "Continuing Education" section every month to learn of upcoming postgraduate courses, or they can hang on to the January issue which contains the annual directory of continuing education courses, or a reprint of the directory which they receive directly.

Memorial library

TMA's Memorial Library has been providing medical information to physicians and allied health personnel for more than 50 years. Its professional staff now fills more than 12,000 reference requests per year, sending physicians copies of articles from medical journals to fulfill immediate information needs. This service to TMA members includes the use of Medline, a computer hook-up between the TMA Memorial Library and the National Library of Medicine in Bethesda, Md. The computer can, in a few minutes, select and print out all bibliographic references (within the past two years) to a specific subject; its data base consists of some 400,000 citations to articles in selected journals indexed in *Index Medicus*.

In addition to providing books and journals, the Library also has a well-stocked room full of cassettes, tapes, and films; most are for the education of physicians,

but many are suitable for providing health information to lay audiences. Health education materials are made available to the public through various groups. Extensive use of the Library also is made by premedical and medical students, as well as by graduate students in related fields. The TMA Board of Trustees spend about $127,000 a year to support the Library, but its services are free to those who use it.

Largest medical meeting

The largest medical meeting in the state is the Annual Session of the Texas Medical Association. Its practical and informative scientific programs attract roughly one-fifth of all TMA members, sometimes more, in any given year. What with meetings of 18 scientific sections, some 33 specialty and related medical societies, and 10 (give or take a couple each year) educational symposiums sponsored by Association committees, there is something of value for every physician who attends. Members and guests of the Association attend free. Far from being a profit-making venture, the Annual Session represents an outlay of more than $83,000 annually, the fruits of which are reaped by patients who get better medical care because their physicians' scientific educational opportunities have been greatly expanded.

As part of the Annual Session, the opportunity to present and view exhibits offers still another means of gaining scientific and technical information. Each year approximately 50 scientific exhibits show new or improved surgical techniques, the latest in new diagnostic methods, results of scientific studies, and information and/or services available from various organizations and agencies to help physicians help their patients. Complementing these displays are technical exhibits that show the doctor what's new on the market, or how to put an old product to a new use.

The education of a physician never ends, and one of the primary interests of the professional organization for physicians is to provide the best possible medical education and training, plus opportunities for continuing education throughout the practitioner's active years.

Through various funds, the TMA Board of Trustees has been in a position to loan up to $160,000 to medical students during 1974. Because of the Association's interest in assuring opportunities for young people in medicine, it is true today that no qualified young Texan need be denied a medical education because his or her family cannot meet the considerable expense.

Medical education support

In addition, the Association has strongly and consistently supported medical education directed toward providing more physicians for the state. While urging more ample financial support for Texas' six medical schools and asking those schools to train more primary care physicians, the TMA has developed and effected programs designed to increase the number of physicians in the state, and to encourage young people to examine the advantages of practicing in areas of greatest need. As an example of the results of these efforts, Texas medical schools graduated 318 doctors of medicine in 1969; in June 1974, the figure was up to 599—almost doubled in five years.

As part of its total program designed to encourage and stimulate physicians to increase their medical knowledge, the

Association—through the office of *Texas Medicine*—serves as a statewide clearinghouse for informing doctors of continuing education courses. The annual directory and monthly listings in the journal, mentioned earlier, provide much information. Frequently, physicians simply telephone to ask for specific information.

To insure high standards, the Committee on Continuing Education is developing a pilot program to accredit continuing education courses in local hospitals and institutions in the state.

Physicians who seek places to practice, and communities which seek physicians may get in touch with each other through the TMA's physicians placement service. It also helps physicians who are looking for associates. Bimonthly lists are prepared; physicians seeking locations receive a list of opportunities, and communities seeking physicians and physicians who need associates receive a list of available doctors.

Furthering the goal of adequate number and distribution of doctors in Texas, the TMA's Office of Medical and Health Manpower has developed major reports on the supply and distribution of physicians. Information compiled is distributed to institutions, agencies and others. (Regardless of interpretations of the data, it is essential that all interested groups within the state work from the same data base.)

Manpower seminar

In 1972, a Manpower Seminar was conducted by the Association for deans and representatives of medical schools and teaching institutions; the purpose was to inform them of the problems involved—inadequate percentage of physicians engaged in primary care—and ask for their assistance in resolving them.

Scientific and educational groups also are helped to further their informational programs via use of the TMA's addressing and mailing facilities, and the Association maintains an Administrative Office for Specialty Societies which now provides services to ten organizations. Primarily, that office presents technical information through seminars and scientific programs designed for medical specialists.

Within the organizational structure of the Texas Medical Association, numerous councils and committees, with approval from the House of Delegates, contribute thousands of physician-hours to help formulate policy on scientific issues and see to it that practicing physicians are informed. For example, the Committee on Athletics works closely with The University of Texas Interscholastic League to identify and alleviate major causes of injuries to schoolboy athletes; the Committee on Cancer is setting up a system to provide the latest treatment information immediately to a clinician who reports a specific case; the Committee on Maternal Health reviews every maternal death in Texas to learn whether or not it was preventable.

The public benefits directly from the Association's public information program, which meets hundreds of requests each year for health information from students, teachers, and others. In addition, health information is spread through news releases, public service radio and television announcements, pamphlets, and outdoor billboards.

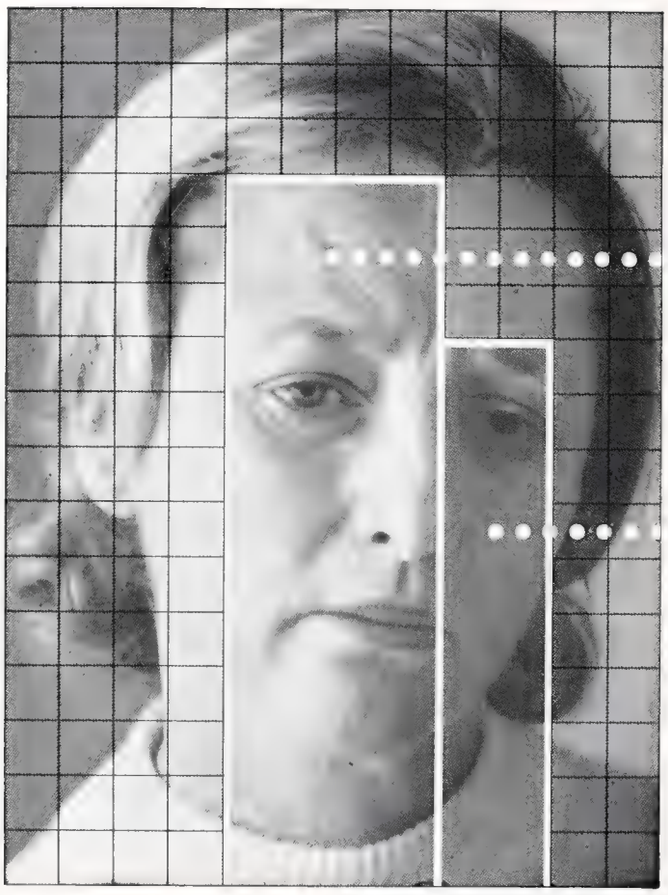
Free-lancers and staff members of news media depend on the Association to provide them with, or check the accuracy of, health, medical, and scientific information needed

for their articles or radio or television scripts.
Ethical considerations of the practice of medicine are closely intertwined with its scientific aspects, and the TMA's Board of Councilors interprets the Code of Ethics as it pertains to potential ethical dilemmas in situations such as organ transplants and acupuncture.

Group travel

The Association-sponsored international tours are so popular that word-of-mouth publicity often brings in enough reservations to fill a flight even before a tour is announced officially. When possible, more planes are added and more physicians and their families are able to enjoy vacations in the Orient, the Mediterranean, Scandinavia, Europe. Although the doctors leave their familiar practices for a while, they return with a wider knowledge of their profession. During their travels, they participate in specially arranged medical seminars during which they are introduced to scientific and technical developments in other parts of the world. They "talk shop" with internationally acclaimed practitioners, teachers, and researchers; they walk through wards and laboratories and libraries sharing legend, history, and glimpses of what medical science promises for tomorrow; they return with greater knowledge and new perspectives.
Lengthy as this listing has become, it merely skims the surface of the extent to which the programs, policies, and activities of the Texas Medical Association encourage excellence in the scientific aspects of learning and practicing medicine in this state, and influence the determination of the profession as a whole to provide the best possible medical care for every Texan.

Both often



Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in freque and/or severity of grand mal seizures require increased dosage of standard a convulsant medication; abrupt withdra may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous gestion of alcohol and other CNS depre sants. Withdrawal symptoms (similar t those with barbiturates and alcohol) ha occurred following abrupt discontinua (convulsions, tremor, abdominal and m cle cramps, vomiting and sweating). K addiction-prone individuals under care

respond to one

According to her major toms, she is a psychoneu- patient with severe ty. But according to the iption she gives of her igs, part of the problem sound like depression. is because her problem, ugh primarily one of ex- ve anxiety, is often accom- ed by depressive symptom- gy. Valium (diazepam) provide relief for both—as xcessive anxiety is re- d, the depressive symp- associated with it are also relieved.

There are other advan- in using Valium for the agement of psychoneu- anxiety with secondary essive symptoms: the hotherapeutic effect of um is pronounced and l. This means that im- ement is usually apparent e patient within a few rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.

Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic anxiety states with associated depressive symptoms

illance because of their predisposi- o habituation and dependence. In nancy, lactation or women of child- ng age, weigh potential benefit st possible hazard.

autions: If combined with other psy- opics or anticonvulsants, consider fully pharmacology of agents em- d; drugs such as phenothiazines, otics, barbiturates, MAO inhibitors other antidepressants may potentiate tion. Usual precautions indicated in nts severely depressed, or with latent ession, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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South American adventure: un buen viaje

Albert F. Vickers, MD

When we later had the opportunity to observe the World Airways DC-8, threaded like a needle through the Andean mountain ranges and old volcanoes surrounding the 9,000 foot elevated highland plain at Quito, we then appreciated the early morning flight departure from San Antonio that permitted a day time arrival.

The Quito air terminal operates, except for emergencies, only during the day, opening after the hot equatorial sun burns off the almost daily morning fog and cloud cover, and closing before the almost daily evening storms move in. Some in the tour group acknowledged that they really had never known of Quito, Ecuador before the tour solicitation arrived. Most knew it well after only a few days for it is a quaint and hospitable city.

We were met at the airport by the local INTRAV (International Travel Advisors) hosts and a brass band. Tired from a prior day's work, the excitement of departure, and a night of travel, it was very easy to shift gears to the lower keyed Latin attitude, atmosphere, and flavor. For Texans already accustomed to retreating below the Rio Grande for vacation and relaxation, this was just a retreat below a more southern border. Your pace is your own, but there is so much to see and do, so little time for it all, that you must not fall prey to the "mañana" key.

Our hotel, nestled in a mountainside, was the Quito International with beautiful yards, gardens, pool, aviary, and zoo. The views were superb, capturing the city as it spilled into the lower valley, inundated the slopes on the other side, and was halted by ranges of mountains capped with an old snow covered volcano for a crown. On the one evening it did not rain early, the sun set over this colorful panorama. In another direction, the view spanned through a mountain-pass window across a fertile plain to more mountain ranges miles beyond. It was a spectacular sight to witness an evening storm move down the valley, or across the plain. Following a storm, city lights nearby were scotomata-ringed in fog, and tree frogs chirped in the garden trees just beyond the balconies. The season in Quito seems almost eternally spring-like.

Optional tours diverse

Optional group tours or individually arranged tours, shopping trips, etc., were too numerous to mention or detail, and I can only highlight some of more unusual interest. Likewise, the planned medical programs, individually arranged visits to local physicians, hospitals, clinics, medical schools, and others, can only be highlighted as I saw them. However, many conversations with others confirm that the opportunities were as endless as individual imagination or desire, and limited primarily by the relentlessly passing time. Be your interest in people, geography, art, artifacts, history, shopping, et al, there was something and more for everyone.

We followed the group city tour with multiple walking tours on our own. My wife, Virginia, prefers to sketch away from the crowds, and for me, photography is certainly easier when not rushing with a group guide. We also appreciate a much better feel for history and the local people and color at the slower pace.

Narrow winding cobblestone streets in the older part of town are crowded with typical Spanish architecture which, in the country, is blended with Indian influence. There is also a pagan blend with Christianity. In the more modern areas, design and architecture are similar to such areas in Laredo or Mexico City or Acapulco. Construction methods and techniques noted in several

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Editor's note: Dr. and Mrs. Albert F. Vickers of Austin were among the 350 physicians and family members who participated in the TMA "South American Adventure" travel program earlier this year. Dr. Vickers took the accompanying photographs; Mrs. Vickers prepared the sketches.

large projects are also like those in Mexico. On a rural trip to an even more elevated Andean high plain, guests were invited to participate in the bull fights at a private ring at the hacienda. One of our World Airways hostesses rode horseback for the grand entrance, and later fought the bull. The entire air crew stayed with us in Ecuador and later in Argentina.

One of the best medical programs was conducted in Quito by a Dr. Plutarco Naranjo, professor of pharmacology. His paper, "The Use of Psychedelic Drugs by Primitive Man in South America," was excellently supported by slides and a series of pre-Colombian artifacts. We had reviewed a chronological series of artifacts the preceding day at an archeological museum in the Bank of Ecuador. One gained newer understanding of the civilization of South America, the Incas in particular, and our own drug-related problems from this experience.

The trip to the equatorial marker qualifies as unique. To be able to stand with a foot in each hemisphere is not possible many places on the globe. To do so at the spot where the French scientific explorers first located the equatorial line during an expedition in the early 1700s produces a sense of participation in history. Realizing the metric system is being considered for universal adoption, we stood at the point where the meter was first quantitated. (A meter is one ten-millionth the distance on the meridian from the equator to the pole.) It was late on a clear and cloudless morning in Quito valley that we departed with the beautiful Pinchincha Volcano clearly in view from our plane.

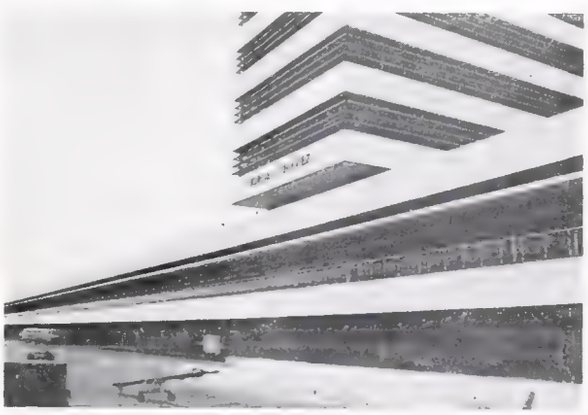
Carnival—Argentine style

We had a pleasant day of flight down the western coast of South America along the Pacific foot of the Andes. Afforded an unexpected fuel stop at Lima, Peru, we deplaned and the shoppers had a hey-day

An Ecuadorian and Andean Indian child in native dress poses at a sidewalk market near the equatorial marker.

An Ecuadorian Indian woman washes clothes in an irrigation canal near Quito.

Barbeque—Argentine style on the pampas.



Jorge Chavez air terminal, Lima, Peru.

A bull fight in Ecuador.

Structures are built on pillars at water level on Tigre river.

in the Jorge Chavez air terminal duty-free shops. On departing Lima, it was up and over the Andean range, a scenic spectacular the entire way to the eastern coast. We arrived at the new Sheraton Hotel in Buenos Aires on a Saturday evening in the midst of Carnival weekend, a Gay-Nineties dance in the hotel, old cars on the entrance ramps, old player nickelodeon in the lobby, and clothes from the era of the Charleston. Tired or not, it was festive and exciting.

Our first daylight view of Buenos Aires was at breakfast, served in the rooftop dining room overlooking a portion of the city. We viewed wide streets, parks, modern sections mixed with older downtown blocks, a rail station, the in-town airport, the harbor, and the bay of the Rio Plate. Buenos Aires is a very continental city. Summer was evident as flowering trees were in splendid abundance everywhere. In this metropolitan area of some eight million persons we had the good fortune to find an American Field Service student working for INTRAV who had visited in our home seven years ago. This young man and his fiancee, a recent MD graduate, provided us with an insider's look at this city. A highlight was a tour of the labyrinths of the Theatre Colon Opera House during a rehearsal. Along the way, others in our group also renewed friendships of the past made through American Field Service exchanges. Others met with family members living and working in the places far away from the United States.

An evening in a La Boca (Italian) district night club during Carnival was enlivened by the singing and dancing waiters. The color and charm of the area, abundant food and wine, and the near endless Conga lines between tables will long be recalled.

We also took a trip through the famous pampas to visit an estancia and witness the heralded gaucho at work and at play. On another day we boated through the Tigre, a resort area in a series of canals and islands which are a part of the delta of the Rio Plate. The area was very much like the canals of Bangkok.

Medical sessions here were highlighted by papers on Argentine hemorrhagic fever and Chagas' disease. The former was of much interest to those of us involved with Korean hemorrhagic fever during the Korean conflict. The latter was of special interest to some of our group, especially some from the Corpus Christi area, as a patient in the United States had been treated at the Driscoll Foundation Children's Hospital.

Adventuresome bus rides

We defied the mystic song, because of our location on the globe, and we "flew up to Rio" arriving in the early morning hours. We found Brazilian drivers all seemingly trying to emulate the famed Brazilian race car pilots. We were quickly exposed to a most hectic bus ride to town. This one was to be followed by many others of similar exploit in the next few days. To make some facetious comparisons, the Ecuadorian driver is fast, noisy, and horn-blowing so you can get out of the way. The Argentine driver is just as fast, but quiet and will thus sneak up on you; the Brazilian is also fast and quiet, but he will come after you.

We stayed at the new Hotel Nacional, a majestic round building on an Atlantic beach away from downtown. It was designed by the Brazilian architect Oscar Niemeyer who also designed Brasília and the United Nations Building in New York. The views of mountains, rain forest vegetation, rocky crag shoreline and islands interspersed with sandy beaches seen from the hotel and roadways of Rio were breath-taking.

We traveled by shuttle-bus to downtown, to the famous beaches of Ipenema and Copacobana. The people really live a life of sand and sun, unbelievably crowding these beaches daily. We missed Carnival in Rio, but the colorful decorations on the esplanades were still in place and gave us a feeling for what the event must have been. Rio is a growing metropolis with extensive modern blending with the old downtown,

A rain forest road in Rio.

Flavela on the water just outside Rio on the way to Petropolis.

The widest avenue in the world is "Avienda Julio Nueve," (July 9th is Independence Day in Argentina).

A rural hotel and club on the road to Petropolis.

The "graveyard of old ships" in La Boca district of Buenos Aires.

and large modern expanding areas elsewhere. It is, unfortunately, very tourist oriented. However, one wouldn't think of not visiting such famous places as the beaches, Guanabara Bay, Sugarloaf, the statue of Christ the Redeemer, Paqueta Island, and the oft-reported cardboard shack slums, the flavelas.

Although flavela slums still exist in some areas, the historical flavela on the mountainside behind Copacobana where "Black Orpheus" was filmed is no longer there. That mountainside has begun to revegetate and minimal visible scars can be detected even on close inspection. There was a large flavela in the valley behind our hotel, quite a study in contrasts to be sure. On Sunday, the pathways out of this crowded hillside appeared as ant trails as lines of people walked chain-like to the beaches. The statue of Christ on Corcovado mountain, also visible from our hotel room, looks down and over this valley, peeking through the clouds on some days, hidden on others, lighted at night.

Developing potential of Brazil

Brazil is a massive country and despite its long history of culture and settlement is just beginning to develop its potential. It is a land with a place for the pioneer, reminiscent of the stories of the development of our own western lands. Some in the group took a specially arranged trip to Brasilia. We did not have time or occasion to go to Sao Paulo, seat of burgeoning industrial

development. We did take the rural tour to Petropolis, a mountain summer resort outside Rio where the last Brazilian Emperor, Dom Pedro II, built a European-styled summer palace. Being in a part of Brazil away from the hustle and bustle of crowds and the tourist city was invigorating.

Our INTRAV guide on this trip was a Californian who was residing in Brazil to complete postgraduate studies with a major in South American history. He was personable, knowledgeable, and of dedicated interest. This day was one of the best tour experiences we have ever had. I read considerably in preparation for such a trip, and I was so stimulated and challenged by this man that I have subsequently delved even more into South American history, culture, and colonization.

Medical sessions here were also interesting. We even had a session patterned after the TMA curbstone consultations. One impromptu program by a young local surgeon about the medical education and practice in Brazil was excellent.

Unfortunately, all good experiences must come to an end, and this one was no exception. It seemed all too soon before we were again aboard our DC-8 enroute home. We cleared customs in Miami during a refueling stop. It was both a quick and reasonably pleasant procedure for a change, and here the shoppers paid their due. We felt this was an excellent trip and we extend our heartfelt praise to all concerned for a job well done. We hope to be aboard and abroad again soon.

Ipenema beach with Copacobana and Sugar Loaf in the distance.

Sugar Loaf as viewed from a tour boat.

A yacht club on the Tigre River specializes in rowing and sculling.

Something 'big' about small town practice

According to Dr. Jesse T. Hopkins, a country doctor is one who has an interesting case on his mind and cow manure on his shoes.

A typical day in the practice of a doctor in a small community includes such patient problems as having difficulty with a spouse or having a sick pig. No two days are similar except in the long number of hours on the job.

Dr. Hopkins, who first established his practice in Brookshire in 1934, is one of many doctors in the state who represent almost total medical care to a small or rural community. The renewed interest in family practice within the medical schools has rekindled interest in the practice opportunities in such areas of the state.

Dr. Hopkins graciously consented to allow *Texas Medicine* to view his practice and life in Brookshire as a representative report on the advantages and disadvantages of a practice in an average small Texas community.

Dr. and Mrs. Hopkins have long meant medical care to the community of Brookshire. As a registered nurse, Mrs. Hopkins has been able to assist her husband in many ways in the small town.

Everyone knows everyone else

"In a small community it is easy to get acquainted with everyone. The atmosphere is friendly, and persons are cooperative. For example, I know the banker, the groceryman, the barber, the ministers, and all of their families. They know me and my family. I see them at church, at the Lions Club, at school functions, and other places. For example, when I go to the football game or attend any of the school functions, the man at the ticket office, whom I know very well, always motions for me and my family to go in, no ticket needed." Dr. Hopkins continued, "My name is on the curb by the walk at the church so in case I am late about getting to church, I shall have a place to park."

Dr. Hopkins, knowing his patients and their backgrounds quite well, is approached with a variety of problems. The third patient he saw when he started practice in Brookshire was a man who wanted some medicine for a pig which had diarrhea. Another incident he related involved a young girl who came to his office with her mother and grandmother. Her complaint was "I'm just breathing too fast." Dr. Hopkins tried to decide what would cause this girl to hyperventilate, so he began to ask her leading questions, such as, "Does this come on after eating a big meal?" Her answer was, "Some time it does and some time it don't." He asked her, "Does it occur most often in the day or at night?" She replied, "Most often at night." He then did a physical examination. She was 18 years of age and had two children.

After taking her blood pressure, pulse rate, etc., he was still not able to make a

Photos by Kyle Searle, press photographer, *Waller County News*

diagnosis. The grandmother finally saw he was rather perplexed so she spoke up and said, "Doctor, she is breeding too fast—not breathing too fast."

One of Dr. Hopkins' patients was an elderly lady who lived alone. She had a premonition that she was going to die. She asked the doctor to call her by phone each morning to see if she was still alive. If there was no answer, Dr. Hopkins was to call the undertaker and go to her house. Why did it take a doctor to do all that? Her answer was that she wanted to be sure that she was indeed dead before the undertaker got her.

At the time Dr. Hopkins started his practice in Brookshire, he had to supply his own equipment, x-ray, and lab facilities. He said that today a doctor has to invest much less since more can be done away from the office by depending on mail service and automation. In addition, many small towns are willing to assist a young doctor financially by building a clinic or providing an office if he or she is interested in establishing a practice in the town.

Mrs. Hopkins, a registered nurse, has been a tremendous help in the smooth operation of the practice. From bookkeeping to administering medicine, she does a little of everything. One time, there was a patient who lived about 15 miles from town. Dr. and Mrs. Hopkins had to borrow a horse to make the last three miles. Coming to a bridge that was very slick with mud, they had to dismount and walk across.

Life in a small town

Dr. Hopkins said he realized that many young doctors do not locate in smaller communities because their families are hesitant about adjusting to such a life. His wife, a native of the Dallas area, said that a few times the adjustment was difficult. However, she said that there have been "more ups than downs" and that they have been very happy. Mrs. Hopkins also ap-

Dr. Hopkins built his own clinic since office space was at a premium in town. At the time he started his practice, he had to supply his own equipment, x-ray, and lab facilities.

Dr. Hopkins examines one of the many patients who come to his office daily.

One of the town's residents equipped a pickup truck with a pulley to hoist Dr. Hopkins' wheelchair to the level of the seat.

preciates the fact that she is able to help her husband in a small town in ways which would be impossible in a large city.

The outstanding reward of living in a small community which has impressed them both is the respect and kindness they receive from their fellow citizens. Recently, during a special day in his honor, Dr. Hopkins received numerous types of recognition including a letter from the residents of the cities of Brookshire and Pattison which set out plans for the establishment of a scholarship to a worthy student in behalf of Dr. Hopkins.

In addition to various social and civic activities in the community, the Hopkinses enjoy the fact that Houston is just 36 miles to the east, giving them the opportunity to participate in the cultural activities and entertainment available in the metropolis.

Decided to be MD at six

According to long-time friend, Dr. F. J. L. Blasingame, now of Chicago, Jesse Hopkins first indicated that he wanted to be a doctor at the age of six. His parents and sister, Una, were determined to see that he was able to receive the necessary education. Thus, graduation from Hempstead High School was followed by attendance at the University of Texas and Baylor College of Medicine, then located in Dallas. Upon receiving his MD degree, Dr. Hopkins served a rotating internship in Baylor University Hospital in Dallas. It was there he met his future wife, Head Nurse Helen Clifford.

Prior to locating in Brookshire, Dr. Hopkins practiced briefly in Dallas and Bryan and as a physician with Humble Oil and Refining Company in Baytown. In 1942 the doctor left Brookshire to serve in the Army Air Corps. Since he was also considering going into pediatrics, Dr. Hopkins thought he would never return to Brookshire. However, in 1948 the citizens undertook a petition for his return. The Hopkinses decided to make Brookshire their home.

Dr. Hopkins has evidenced that a physician can conduct an active practice without relying upon a hospital. The closest hos-

Dr. Hopkins discusses procedures with Mrs. Mary Margaret Henry, lab technician.

pital to Brookshire is 13 miles in one direction; a second is 22 miles in another direction. There is a local 120-bed nursing home in which Dr. Hopkins makes calls once or twice a day. Dr. Hopkins said that although the medical schools use hospitals to a great extent, a small town practicing physician can do without such a facility. The majority of the patients he sees are treated in his office. If a patient requires hospitalization, Dr. Hopkins so advises the patient and refers him or her to a physician in Houston or one of the outlying towns. He contacts the other physician himself and arranges for followup care.

Still making house calls

One aspect of medicine which is still existing in small communities is the house call. Dr. Hopkins said, "I am from the old school, and I put myself in the patient's place. If I had 103 degrees of fever, headache, cough, and pain in my chest, I would not feel like going to a doctor's office and waiting to see the doctor. Of course, in town this patient could go to a hospital." He added, "If I can treat the patient in the home, they will feel better and have more peace of mind. I can understand why a specialist does not make house calls, but for the family practice physician, I hope this is one of the procedures that will not be discarded."

Dr. Hopkins said his patients are aware of such proposed changes in medicine as national health insurance, health maintenance organizations, and professional standards review organizations, but they do not have as much to say as the person in the city.

He explained, "The people here are trying to say 'It won't happen here.' Of course, these people do not see such a need. The city dweller pays cash as he leaves the office whereas, if my patients don't have the money, they will just tell me to write it down. Then, when they come back to pay the bill, they will bring my family some fresh vegetables."

The people in Brookshire, Dr. Hopkins said, are able to understand the rising cost of

medical care since the barber had to go up on his prices; the merchants are charging more; groceries are higher.

Opportunities in family practice

Dr. Hopkins is interested in seeing young physicians attracted to towns like Brookshire. He is all in favor of the family practice specialty, feeling it is the only field in which there is a shortage of specialists. "I think family practice is gratifying in that we see the patient from birth to death." The Brookshire physician is also quite an advocate of continuing medical education. "Medicine is changing so fast that our text books are obsolete in a few years. Continuing education is one of the best things that has happened for the family physician." He added that this is a great way for a country doctor to take a vacation.

Dr. Hopkins said he went into medicine because he wanted to do something that would be a help to someone else, and he did not want to work for a salary. This feeling, as voiced by one physician, is practiced by many throughout the state.

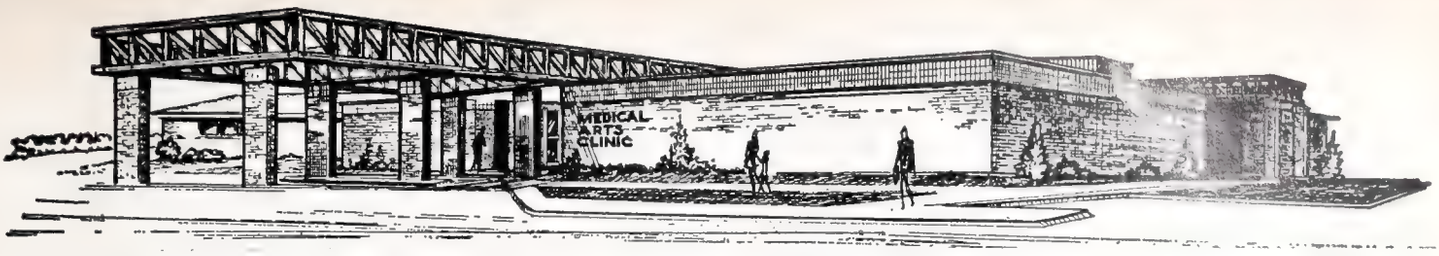
This year, as in the past, numerous small towns have sought ways to honor their community doctors—as respected professionals, learned advisors, and trusted friends.

In Brookshire, Dr. Hopkins is the man of the hour. For several decades he has lived and worked among his patients, sometimes adjusting office hours to accommodate the planting or harvesting schedules of the farm and ranch families; taking an active role in the Boy Scouts with an only daughter at home.

A source of strength

Dr. Hopkins is a special source of strength to his community for his vigorous practice has continued and progressed in spite of the existence of a personal handicap. Early in his career, Dr. Hopkins was victimized by a rare degenerative disease which progressively paralyzed his lower limbs. Yet the doctor has been too busy caring for patients throughout his career to be slowed by an always present cane, crutch, walker, or wheelchair. In fact, one of the town's residents equipped a pickup truck with a pulley which elevates the doctor's wheelchair to the height of the seat. Thus, often accompanied by his wife, the doctor might be seen anywhere in the surrounding countryside enroute to a house call.

As for advice to those considering the profession of medicine, Dr. Hopkins cites two requirements of a good country doctor —interest in the health of one's fellow man, and willingness to be happy with professional satisfactions without the idea of getting rich.



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TMA Office of General Counsel

MEDICAL RECORDS—HOW LONG SHOULD THEY BE KEPT?

While the statutory law of Texas does not require that physicians keep medical records or that, if a physician does maintain such records, they be maintained for any specific period of time, medical records are often the best defense for the physician in malpractice litigation to prove the nonmeritorious nature of the allegations made by the plaintiff. For this reason, among others, it is vitally important for the physician to maintain good medical records and to keep them for a sufficient period of time to protect him in the event that a malpractice suit is filed.

Records of adult patients

If the physician renders medical services to a patient who is above the age of 18 years at the time of the treatment, such a patient is an adult and the statute of limitations will bar a malpractice action against the physician two years after the date of the alleged negligence except where a foreign object is left within the body of the patient following surgery (where limitations do not begin to run until the plaintiff discovers or through the exercise of ordinary care and diligence should have discovered the presence of the foreign object in his body) and in cases arising from vasectomy operations where the Supreme Court has held that limitations start to run on the date of discovery of the true facts concerning the failure of the operation, or from the date the failure should have been discovered in the exercise of ordinary care and due diligence.

Thus, medical records on adult patients must be kept for at least a period exceeding two years, and when surgery has been performed, the records should be maintained for a longer period of time.

Recommendation: Keep medical records relating to adults where no surgery has been performed for a period of at least five years, and where surgery has been performed keep records for a period of ten years unless the patient dies sooner. In the event of death, the records should be maintained for a period of two years following the death unless the above time frames have elapsed prior to death.

Caution: In a recent Supreme Court case, the Court commented that in the event the plaintiff could affirmatively prove fraudulent concealment of the facts by the physician, the statute of limitations may not bar the malpractice action until two years after the date the fraudulent concealment was discovered or should have been discovered, depending upon the particular facts of the situation.

Medical Records of Minors

While action in malpractice against a physician may be brought by the parent or next friend of a child while the child remains a minor, the statute of limitations does not absolutely bar recovery for malpractice on a minor until two years after the minor becomes an adult. For this reason, patient records relating to professional services rendered to minors should be kept for a considerably longer period of time than medical records on adults. Such records should be kept by the physician for at least two years beyond the minor's 18th birthday at which time he would then become an adult. The rules relating to discovery of the foreign object or the failure of a vasectomy procedure apply to the minor as well as the adult patient.

Recommendation: Medical records on minors should be kept for at least five years after the patient becomes an adult, and in the case of records relating to a

surgical procedure performed on a minor patient, such records should be kept for ten years after the patient becomes an adult under state law.

Medical records of non compos mentis patients

Medical records relating to the treatment or surgery provided for mentally incompetent patients should be kept for extended periods of time, beyond the time limits discussed above, for the reason that consent to medical treatment or surgery for such patients is a difficult and often unresolved problem. The physician is often faced with the question of which person is actually authorized to grant consent for the treatment of a mentally incompetent patient, and the court appointed guardian of such persons may often change because of death or resignation of the original guardian.

Recommendation: Patient records for non compos mentis patients should be retained indefinitely or for as long as possible since the statute of limitations may, in some instances, actually never bar suit for alleged malpractice.

What is a medical record?

Since the statutory law does not define a medical record or require the maintenance of such records, physicians often inquire as to what documents or items should be included as a medical record. The records should contain all of those items which, taken together, would describe and document the physician's treatment of a patient. Of course, the record includes the medical history taken, the physician's notes, lab reports, and other like documents. The records should also include copies of reports made to insurance companies, the original consent forms executed by the patient, copies or notations of all drugs prescribed, x-ray film, tracings, and other documentation of the diagnosis and treatment provided to the patient. In determining what items should be included in the medical record, the physician would be well served to remember that sketchy, incomplete, and unintelligible medical records may well make for a sketchy, incomplete and unintelligible defense should the physician be sued for malpractice and required to rebut allegations of negligence in his care and treatment of a patient.

MEDICINE AND THE LAW

STATE BOARD OF INSURANCE HMO REGULATIONS RULED INVALID

On Dec 13, 1973, the chairman of the State Board of Insurance issued "Guidelines for the Formation and Operation of Prepaid Comprehensive Health Care Plans" which sought to place under the regulatory authority of the State Board of Insurance the formation and operation of prepaid comprehensive health care plans in Texas.

The guidelines provided in Section 1:

> The nucleus of this plan is to separate bilateral contracts, one contract between the insurer and the enrollees (or their representative) and another contract between the enrollees (or their representative) and the providers.

The guidelines also stated:

> Stipulating that an unrestricted prepaid health care plan cannot be authorized in Texas at this time, the following guidelines undertake to provide not only regulation for insurers but also a pattern within which a prepaid comprehensive health care plan can operate in order to comply with the existing spectrum of state laws applicable to such plans.

Shortly after the guidelines were publicly announced and the State Board of Insurance assumed jurisdiction over all prepaid health care plans, Sen A. R. Schwartz, chairman of the Senate Jurisprudence Committee, presented to the attorney general a request for a legal opinion as to "whether the operation of a prepaid health care delivery system comes within current statutes as being the transaction of the business of insurance and as such controlled by applicable insurance regulatory law or whether the same is a service which would be controlled, where applicable, by other laws such as the Texas Medical Practice Act and the Texas corporate law."

The opinion request from the Senate Jurisprudence Committee also stated:

> This matter is of concern to a great number of Texans as well as our Committee and we are aware that while the subject is not new, it has recently been proposed as an alternative health care delivery system, the merits of which are more properly left up to others. Our concern is whether or not there exists any so-called "legal barriers"to those health care professional plans and members who desire to avail themselves of such a plan.

The Texas Medical Association took the position that the various alternative plans described in the opinion request presented by the Jurisprudence Committee to the attorney general were examples of organized efforts to assure the delivery of certain health care services to enrollees on a per capita prepayment basis and were not examples of organizations engaged in the insurance business. Further, it was the TMA position that activities of such organizations should not be held as activities constituting the transaction of the business of insurance and, therefore, they should not be controlled by insurance law or regulation.

On July 11, 1974, John L. Hill, attorney general of Texas, issued Opinion No. H-344 which held, in summary:

> Except as to possible general regulation of an insurance company involved in a health maintenance organization, the State Board of Insurance has no regulatory power over prepaid health care delivery systems. Whether or not other regulatory authorities may have an impact on such systems will depend upon the facts of each type of plan.

The attorney general, in rendering his opinion, cited opinions from federal courts as well as state appellate court opinions from Ohio, New Jersey, California, North

Dakota, Oregon, prior attorney general of Texas opinions, and recognized that "the question you (the Jurisprudence Committee) pose is one which has long bothered the courts of the United States."

The opinion agrees with the conclusion previously reached in Texas Attorney General Opinion No. O-4986-A which held that a nonprofit rural health service, incorporated for the purpose of promoting the health of its members, where members paid a membership fee in return for which they were furnished dental care, medical care, drugs, etc., on a nonprofit basis through an agreement with various hospitals, physicians, and drug stores did not fit "the description of any type of insurance subject to state regulation and found that the service was not in the insurance business and was not subject to supervision of the State Insurance Department."

In reviewing applicable state law, the attorney general found only two instances where Texas statutes purport to regulate health maintenance services, the first being Article 3.71, of the Insurance Code which authorizes plans written for residents of the state who are 65 years of age or older, and the other, being Articles 20.01 to 20.21, authorizing Group Hospital Service Plans "under extremely limited circumstances."

Additionally, the opinion reviews the enactment of Article 4509a, a part of the Medical Practice Act, in following language:

> In 1971 (Acts 1971, 62nd Leg, ch 627, p 2041) the Legislature adopted what appears as Article 4509a, authorizing the Texas State Board of Medical Examiners to approve and certify health organizations upon certain conditions. Delivery of health care to the public is one of several purposes for which such organizations may be formed. We do not pass upon or express any opinion as to the validity of Article 4509a in view of the fact that that very question is presently before the United States Court of Appeals for the 5th Circuit in Cause No. 73-2557, styled, *Genaro Garcia v. Texas State Board of Medical Examiners, et al* . . .
>
> Whatever the validity of Article 4509a, its enactment by the Legislature in 1971 evidenced the intention of the Legislature that such an organization be regulated by the State Board of Medical Examiners and not by the Board of Insurance. (citing cases)
>
> We believe we may summarize what we have said as follows: While some of the plans which you have submitted to us may constitute the doing of an insurance business, there is no provision of the Code which would authorize the State Insurance Board to regulate or lay down guidelines for prepaid health delivery systems. The fact that the Legislature has enacted 4509a, whether invalid or not, is another indication of the intent of the Legislature that such plans not be considered insurance.

Thus, the attorney general of Texas has cleared the way for the development of comprehensive prepaid health care plans, sometimes referred to as HMOs, by physician groups and others, so long as the plans comply with provisions of the Texas Medical Practice Act and other applicable licensing regulations.

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Medicine in literature

A Decade of Progress: The United States Army Medical Department 1959-1969
Editor in Chief Col William S Mullins, MSC, USA, and Editor Rose C Engleman, PhD, 214 pp, illus, Washington, DC, Office of the Surgeon General, Dept of the Army, 1971, $2.25.

For those of us who had the privilege of serving under Leonard D Heaton, this book has special significance. The ability and leadership of this man was felt by everyone within three days after he set up his headquarters in Blanford, England. The insistence on keeping up with all medical developments and improvements in medical care of the patients, is as apparent in this book as it was in our clinical experience.
Special techniques developed in surgery, medicine, radiology, nuclear medicine, preventive medicine, psychiatry, dentistry, nursing, and ancillary services are all placed in their proper context and relationship to the functioning programs.
Emphasis on the many training aspects, supply, maintenance, facilities, personnel, administration, and management, all play important roles in the activities of the medical teamwork which is global in its scope.
Special problems related to the geographic location such as the arctic, the desert areas, and the tropical climates, all have their special problems to cope with.
Army medical research and development has in the past, and will in the future, contribute to our civilian health and welfare. It is an area not fully appreciated by most people and there are few who have not benefited from these activities either directly or indirectly. The reviewer had often wondered just what the scope of the Surgeon General's activities were, and this book comes nearer to telling us than most information sources.
It has been a matter of personal pleasure to review this book and a privilege to pay tribute to a man who has merited the admiration and respect of all who have had the privilege of serving under him.

JOE C RUDE, MD
Austin

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Second International Venereal Disease Symposium: *Epidemic Venereal Disease,* North Miami, Symposia Specialists, 1973

Spain David M, Kole Janet: *Post-Mortem,* Garden City, NY, Doubleday, 1973

Stearn Jess: *Dr. Thompson's New Way for You To Cure Your Aching Back,* Garden City, NY, Doubleday, 1973

Tuft Louis: *Allergy Management in Clinical Practice,* St Louis, CV Mosby, 1973

US Department of Health, Education, and Welfare: *Hospital Services for Selected Chronic Disease Patients, vol 1,* Bethesda, US Department of Health, Education, and Welfare, 1972

Vinken PJ, Bruyn GW (eds): *Handbook of Clinical Neurology,* vol 9, New York, American Elsevier Publishing Co, 1970

Welsh Robert C (ed): *The Second Report on Cataract Surgery,* Miami, Miami Educational Press, Inc, 1971

Wilson John L (ed): *Handbook of Surgery, ed 5,* Los Altos, Lange Medical Publications, 1973

Medical Newsmakers

DR. DAVID D DALY has been named to head the Professional Advisory Board of the Epilepsy Foundation of America. Currently a professor in the department of neurology at The University of Texas Southwestern Medical School at Dallas, Dr. Daly has served the Epilepsy Foundation in numerous capacities since its establishment in 1968. He is also president of the International League Against Epilepsy.

Five Texas physicians have been awarded research project grants by the Southern Medical Association. They are among 32 researchers, selected from more than 100 applicants, to receive an SMA research grant this year. The doctors include DR. DAVID A BASS, department of medicine, The University of Texas Southwestern Medical School at Dallas; DR. HERBERT H BUNCHMAN II, department of surgery/plastic surgery, The University of Texas Medical Branch at Galveston; DR. JOHN M DALY, department of surgery, The University of Texas Medical School at Houston; DR. JAMES P DORMAN, department of cardiothoracic surgery at The University of Texas Medical School at San Antonio; and DR. WINTHROPE R HUBLER JR, department of dermatology, Baylor College of Medicine, Houston.

Two new associate deans, DR. GEORGE T BRYAN and DR. DAVID C EILAND, have been named to coordinate curriculum affairs and student affairs for the School of Medicine at The University of Texas Medical Branch. DR. JOHN C BRUHN, associate dean for community affairs, and DR. SPENCER G THOMPSON, associate dean and coordinator for sponsored programs, complete the new administrative structure of the School.

The Bexar County Medical Society has unanimously adopted two resolutions citing DR. A FLETCHER CLARK and DR. MAX E JOHNSON for outstanding contributions to the society and the patients it serves. Dr. Clark and Dr. Johnson have long been active in the county medical society and the Texas Medical Association, both having served as TMA delegates from Bexar County.

DR. WILLIAM W SCHOTTSTAEDT has been named to direct the Area Health Education Center (AHEC), a multi-million dollar project of The University of Texas Medical Branch at Galveston. Formerly a professor in the Department of Family Practice and Community Health at the University of Oklahoma, Dr. Schottstaedt brings to UTMB over 20 years of academic experience that began with his first appointment in 1953 as assistant professor at OU's School of Medicine. Since 1956 he has held several academic appointments, including the deanship of the University of Oklahoma School of Health.

Former Texas family physician, DR. RUDOLPH C HECHT, has been named a Mexican Consul in Madison, Wisc. Dr. Hecht, assistant clinical professor in the University of Wisconsin Medical School's Department of Family Medicine and Practice, had practiced medicine in LaFeria, Tex, from 1957 to 1973.

A high award honoring a pioneer German Rocketry scientist was recently presented to one of America's eminent space flight scientists. DR. CHARLES A BERRY, former director of Life Sciences for the National Aeronautics Space Administration, received the Hermann Oberth Award at the 23rd Space Congress in Salzburg, Austria, in late June. Dr. Berry, now president of The University of Texas Health Science Center at Houston, was cited for "his excellent work in space medicine, his outstanding efforts in the realization of manned flight to the moon and for his pioneering work in preparing man for longer duration flight through the Skylab missions." His efforts to transfer benefits of space flight science to earth medicine were singled out.

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

B COHEN
Austin, 1915-1974

J T DOWNS, JR
Dallas, 1888-1974

T C GREEN
Austin, 1920-1974

I KASSANOFF
Dallas, 1940-1974

W L PETERSON
San Antonio, 1903-1974

T A WHARTON
Dallas, 1904-1974

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

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Recent deaths

Dr. W L Peterson
Dr. Walter Lee Peterson died April 12, 1974 in San Antonio. The retired US Army colonel was born March 18, 1903. Following graduation from the University of Minnesota Medical School in Minneapolis, he interned at Letterman Army Hospital in San Francisco. He also attended the Army Medical School in Washington, DC and Medical Field Service School in Carlisle, Pa. Dr. Peterson retired from the Army in 1955 to become superintendent of the San Antonio State T B Hospital.
His memberships included Bexar County Medical Society, Texas Medical Association, American Medical Association, American College of Surgeons, and Texas Thoracic Society. He was an honorary member of Alpha Omega Alpha.
Survivors include his wife, Helen J Peterson, San Antonio; one daughter, Mrs. Peter Comisarow, Bayville, NJ; a son, Dr. Walter L Peterson, Jr, San Francisco; three sisters; one brother; and two grandchildren.

Dr. I Kassanoff
Dallas internist and cardiologist and clinical instructor in medicine at The University of Texas Southwestern Medical School, Dr. Ira Kassanoff, died June 16, 1974 following a lengthy illness.
Born in El Paso in 1940, the physician received a BA degree in 1962 from Rice University. He graduated from The University of Texas Southwestern Medical School at Dallas in 1966. Following an internship at Tufts New England Medical Center in Boston, Dr. Kassanoff held residencies in internal medicine at Grady Memorial Hospital, Atlanta, and Parkland Memorial Hospital in Dallas. He also held a year's fellowship in cardiology at Emory University Medical School, Atlanta. From 1967 to 1969, Dr. Kassanoff was a Lieutenant Commander at the US Public Health Service National Center for Disease Control.
Dr. Kassanoff was a member of Dallas County Medical Society, Texas Medical Association, American Medical Association, and a diplomate of American Board of Internal Medicine.
Survivors include his wife, Claire Schlosberg Kassanoff; three sons, Neal Kassanoff, Richard Kassanoff, and Gregory Kassanoff; and a brother, Dr. Arnold H Kassanoff, all of Dallas.

Dr. Peterson

Dr. Kassanoff

Dr. T C Green
Travis Cochran Green, Austin physician since 1970, died Mar 27, 1974. He was 54 years old.
Dr. Green received a BA degree from The University of Texas at Austin, and an MD degree from The University of Texas Southwestern Medical School at Dallas.
He completed an internship at Baylor University Medical Center at Dallas and began practicing medicine in Rockdale in 1953. He moved to Austin in 1969, where he remained until his death. Dr. Green had served as a major in the US Air Force during World War II.
He was a member of Travis County Medical Society, American Academy of Family Physicians, Texas Medical Association, and American Medical Association.
He is survived by his wife, Margaret Corbett Green, Austin; three sons, Dr. Cochran Green, San Antonio, Michael Green and Donald Green, both of Austin; three daughters, Mrs. Kathryn Chandler, Ashville, NC, Mrs. Patricia Ricketson and Miss Virginia Green, both of Austin; and two grandchildren.

Dr. Cohen

Dr. Downs

Dr. B Cohen

Austin neurologist, Dr. Ben Cohen, died June 26 as the result of a heart attack. The 58-year-old physician had practiced in Austin since 1960.

Born in Williamstown, Pa, and educated in Lebanon, Pa, Dr. Cohen was a graduate of Jefferson Medical College in Philadelphia. He served an internship at Williamsport General Hospital, Williamsport, Pa, and neurology and psychiatry residences at Hines Veterans Administration Hospital, Chicago, and Coatesville Veterans Administration Hospital, Coatesville, Pa. He did postgraduate study in neurology at Northwestern University Medical School, Chicago.

Dr. Cohen was a member of Travis County Medical Society, Texas Medical Association, American Academy of Neurology, American Medical Association, Austin Neurological Society, and Austin Psychiatric Society.

The doctor is survived by his wife, Rochelle Davis Cohen, Austin; daughter, Beth Cohen, Austin; one brother; and two sisters.

Dr. J T Downs, Jr

Dr. James Tickell Downs, Jr, died in Dallas June 4 following a lengthy illness. The phyician had been retired since 1965.

Born in 1888 in Dallas, Dr. Downs held a BA degree from The University of Texas and an MD degree from the University of Pennsylvania School of Medicine, Philadelphia. He served as assistant house surgeon during an internship at the New York Lying-In Hospital in 1912, followed by a residency at the Lankenau Hospital in Philadelphia. Dr. Downs started to practice in Dallas in 1915. Various positions that highlighted the doctor's career included chief pathologist, St. Paul Sanatorium (now St. Paul's Hospital); medical director, Fidelity Union Life Insurance Company, Dallas; the Century Educators Life Insurance Company, Fort Worth; and the Guiberson Diesel Engine Company.

Dr. Downs was an honorary member of Dallas County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by two sons, Dr. James T Downs, III, Dallas; and Erich Downs, Silver City, NM; four grandchildren; and four great-grandchildren.

Dr. T A Wharton

Retired Dallas physician, Dr. Turner Ashby Wharton, died April 5 in Sherman following an extended illness.

Dr. Wharton was born in 1904 in Columbia, Tenn. He attended Austin College in Sherman and Centre College in Danville, Ky.

He was graduated with an MD degree from The University of Texas Southwestern Medical School at Dallas in 1944. Dr. Wharton interned at the Wichita Falls Clinic-Hospital and served on the staff of the Stephenville Clinic-Hospital. His career included ten years of private practice in Dallas. In 1955, he was named to the staff of the Department of Health, Communicable Disease Control of the City of Dallas. He retired in 1969 and moved to Lake Texoma, Sherman.

Dr. Wharton's memberships included the Dallas County Medical Society, the Texas Medical Association, and the American Medical Association.

He is survived by a son, T A Wharton, III, Freeport; two daughters, Mrs. Julia Sweet, Andrews, and Mrs. Ruth Penny, Sherman; two sisters, Mrs. Charles E Allen, Newbern, Ala, and Mrs. Catherine W Gray, Sherman; and four grandchildren.

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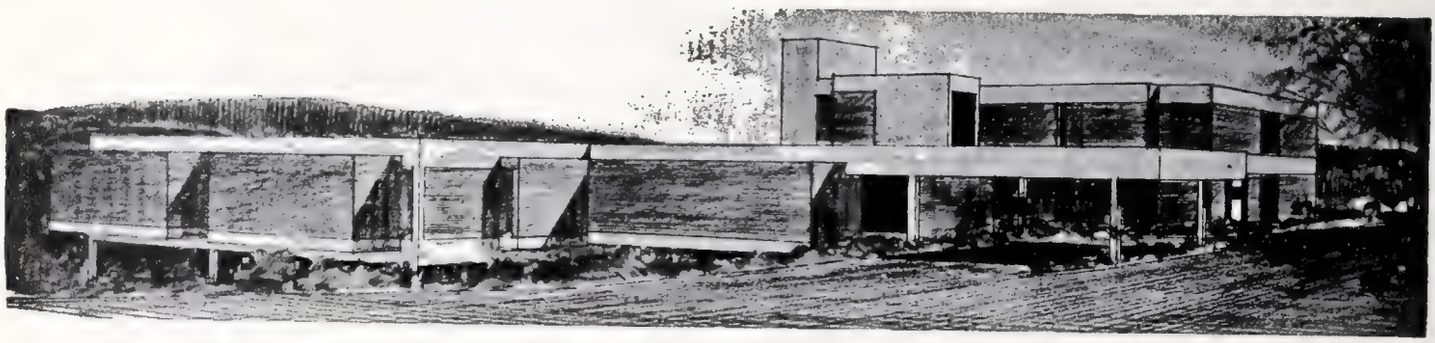

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Myxedematous patients are very sensitive to thyroid and dosage should be started at a very low level and increased gradually.

Precaution. As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions. Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

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Overdosage Symptoms. Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

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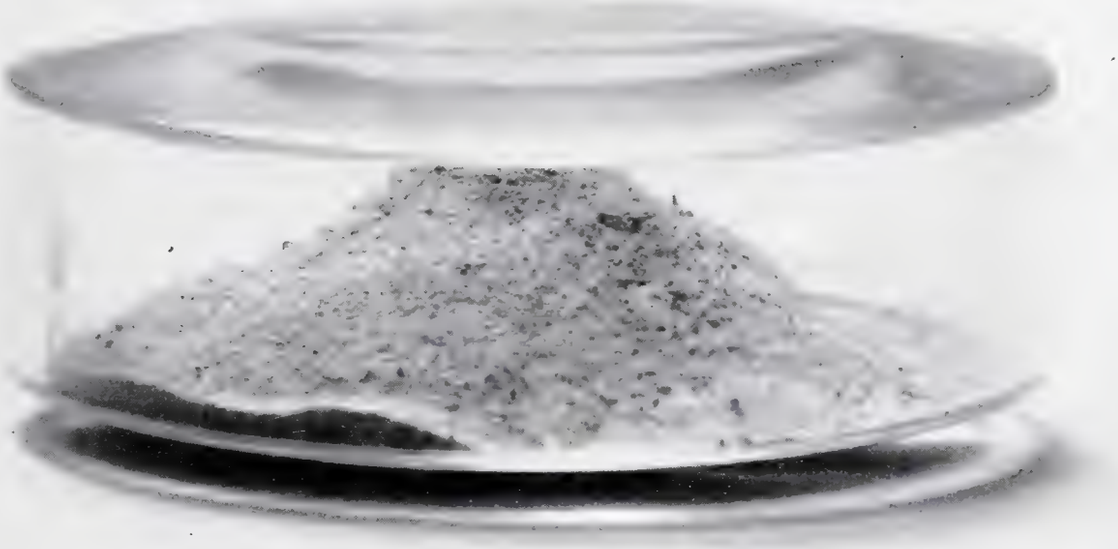

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It may be useful to explain to the patient the mechanism by which emotions upset normal G.I. functioning, resulting in hypersecretion and hypermotility and thus causing such symptoms as nausea and epigastric pain. In upper functional gastrointestinal disorders, counseling by the primary physician can often help the patient understand how excessive anxiety may cause flare-ups of G.I. symptoms.

A disproportionate number of patients seen by the general practitioner suffer from functional disorders, as do more than half of those seen by the gastroenterologist.* Where milder cases may respond to counseling alone, if symptoms are severe and disabling to any degree, a suitable regimen may include medication to reduce the symptoms and the excessive anxiety that often provokes these distressing symptoms.

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*Rome HP, Brannick TL: Orientation and mechanism of functional disorders; clinicophysiologic correlation, chap. 133, in *Gastroenterology*, edited by Bockus HL. Philadelphia, W. B. Saunders Company, 1965, p. 1116.

An adjunct in anxiety-related upper functional G.I. disorders

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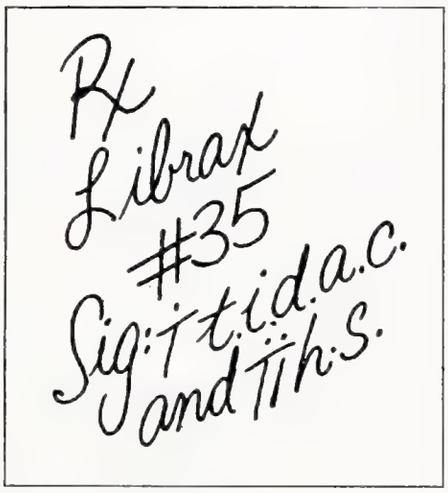

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Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido —all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

Dosage: Individualize for maximum beneficial effects. Usual maintenance dose is 1 or 2 capsules, 3 or 4 times a day, before meals and at bedtime. Geriatric patients—see Precautions.

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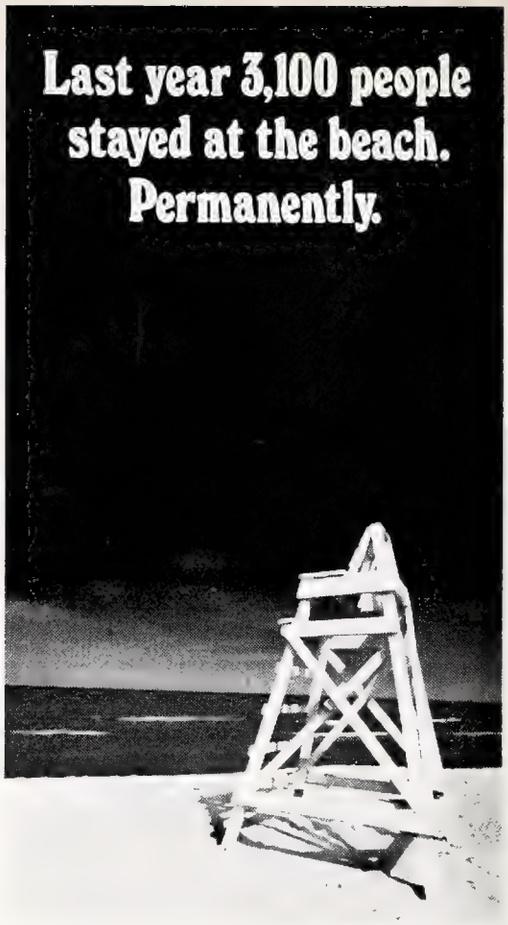

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INTERNIST AND GENERAL PRACTITIONER WANTED by a four man group in a 10,000 population county seat town in Central Texas. The location is one hour from Dallas and Fort Worth, 30 minutes from Waco, and 20 minutes from Lake Whitney Dam. The clinic is located in the same building with a 50-bed, fully accredited hospital. The doctors have no hospital financial responsibility. Will start the right man at $36,000 salary for first year and full partnership after one or two years. All office expenses paid. Visiting & relocation expenses paid. Please reply to Ad-301, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FP OR IM TO JOIN THREE MAN GROUP. Investigate facilities, compatability, economics and environment personally with wife and family. Community Health Center, P.O. Box 672, Trinity, Texas. 713-594-3595 for Barnes, Colwell or Cook.

EMERGENCY DEPARTMENT PHYSICIAN IN TEXAS: Average earnings $45,000 with guarantee. Full department status. Maintain free practice of medicine. Work for patient on fee-for-service basis. Call 1-512-653-8221. Apply to Ad-417, *Texas Medicine*, 1801 North Lamar Blvd., Austin, 78701.

FAMILY PRACTICE PHYSICIAN NEEDED to join a three man group doing general practice. New community hospital and new clinic building under construction now, modern golf course, large lake, excellent hunting, excellent schools with no busing and no integration problems. 90 minutes from Dallas-Fort Worth. No investment necessary. Salary first year negotiable, with partnership after one or two years if desired. Contact K. J. Wharram, M. D. or A. D. Major, M.D., Nocona, Texas 76255. AC 817-825-3371.

FAMILY PRACTICE with two other physicians. 50 bed hospital adjacent to clinic. Two nursing homes located in town. Large patient drawing area, good fishing, hunting, 8 miles to Lake Whitney, excellent schools, churches, and progressive small town. Guaranteed salary until established, partnership available in future. Contact Morris R. Hill, M.D. or James G. Barton, M. D. at Barton & Hill Medical Association, P. O. Box 546, Whitney, Texas 76692; phone AC817-694-2221.

THREE PHYSICIANS NEEDED. FAMILY PRACTICE PHYSICIAN, INTERNIST AND SURGEON needed to join a full time, five man clinic association group with part time radiologist and clinical pathologist in Clifton, Texas. Located in the heart of Texas, 35 miles NW of Waco, 15 miles from Lake Whitney. Good fishing, excellent hunting, new, recently completed, modern golf course. Excellent schools, churches and growing progressive small town. Closely associated with new 65-bel hospital facility, which is fully accredited by the Joint Commission. Suggest salary at first with partnership in future. Financial terms open. Please contact V. D. Goodall, M.D., Clifton Medical and Surgical Clinic Association, Clifton, Texas 76634. Telephone 675-8621 or 675-3113.

WANTED: PHYSICIAN TO JOIN GENERAL SURGEON AND GENERAL PRACTITIONER in small town. Privately owned clinic and hospital combination. Guaranteed salary. Prefer family practice specialist. For additional information, please contact M. A. Childress, M.D., P.O. Box 289, Goldthwaite, Texas 76844; Phone 915-648-2212.

FAMILY PRACTICE, with two other family practitioners. Two hospitals with 550 beds within fifteen minute, 4 lane drive. Progressive Central Texas community of 4,350 population. Community void of problems of large cities. 15 miles to Waco (pop. 102,000); 100 miles to Dallas, Fort Worth, and Austin. Good schools (no bussing), churches, country club with 18 hole golf course, three nearby lakes, recreational facilities. An excellent place to raise a family. New associate would be on salary first year; partnership in association later. Exchange calls and weekends with two other physicians. Contact R. Dean Elliott, Administrator, 414 Johnson Drive, McGregor, Texas 76657. AC817-840-3281.

PSYCHIATRIST WANTED: Board certified or eligible, bilingual (Spanish & English) psychiatrist interested in Day Care concept to join the Staff of the El Paso Psychiatric Clinic. Apply Director, El Paso Psychiatric Clinic, 2616 North Oregon, El Paso, Texas 79902.

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from big city problems. Call collect Dr. Preston McCall at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

RADIOLOGIST to associate with multi-specialty clinic, soon to be in new hospital with all new equipment; fringe benefits, good climate, good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

INTERNIST with subspecialty in either pulmonary disease or gastroenterology to associate with multi-specialty clinic, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

FAMILY PRACTITIONER to associate with multi-specialty clinic developing a special section on family practice, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

PATHOLOGIST to associate with multi-specialty clinic soon to be in new hospital with all new equipment; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

TEXAS, SAN ANTONIO: EMERGENCY PHYSICIANS NEEDED for new group serving three hospitals; 65,000 ER visits a year. Fee-for-service. Departmental status. Past earning history $45,000 plus additional income for optional participation in employee health service. Write or call George Pruett, M.D., 5239 Round Table, San Antonio, Texas 78218. Telephone 512-653-3612.

UNIQUE CONCEPT: Two family MDs to start in June-July to work nine months rotating schedule, then off three months with salary. Gulf Coast, beaches, deep sea fishing, good attached hospital, salary open first year. Write, call, or come by: Medical Arts Clinic, 1711 West Wheeler, Aransas Pass, Texas 78336; AC512-758-5326.

WE HAVE EXCELLENT OPPORTUNITY in area for GP who wants to do routine surgery, or surgeon who would supplement with FP. Well-established, fully-manned hospital in town. Other physicians would welcome one or two new men. Relaxed life style plus career opportunity for you and your family. More particulars from H. A. Raesener, Jr. (Administrator), Llano, Texas 78643; 915-247-5040.

WANTED: GENERAL PRACTITIONER OR INTERNIST on staff of San Angelo Center. This is an institution for the moderately mentally retarded of the state. Salaries are quite competitive with other state and federal institutions. 40 hour work week, ample vacation time, and other fringe benefits. Excellent community to live near San Angelo, Texas. Contact Medical Director, San Angelo Center, Carlsbad, Texas 76934.

ENNIS, ELLIS COUNTY: OPPORTUNITY for family practice in community of 12,000, serving a trade area of 20,000. Five physicians in town, one hospital, 55 beds, open staff. 35 miles from Dallas. No weekend E. R. call, covered by hospital based physicians. City of Ennis employing physicians on contract basis, office supplied, nurse supplied, billing provided, group hospitalization, paid vacation, etc. Contact Ronald Hudspeth, Administrator, Ennis Municipal Hospital, 803 West Lampasas, Ennis, Texas 75119.

PEDIATRICIAN TO JOIN three board certified pediatric group in professional association; liberal salary and fringe benefits; new pediatric center building to be completed in October is located next to teaching Children's Hospital; beautiful city by the sea, warm year round climate, population 250,000. For details write Box 3154, Corpus Christi, Texas 78404.

SAN JACINTO METHODIST HOSPITAL, BAYTOWN, TEXAS. Physicians solo or group practice; family practice, orthopedics, psychiatry, pediatrics, anesthesiology, etc. Home of Exxon, U.S. Steel, major expansions underway. High income. On bay near Houston. Outstanding schools, colleges. Contact Administrator, 1101 Decker Drive, Baytown, Texas 77520; 713-427-0411, ext. 234.

IMMEDIATE OPENING FOR ONE FULL-TIME MD to complete five-man ER team. 500-bed JCAH approved teaching hospital in Corpus Christi, a town of 225,000 in South Texas. Wanted—settled physician over 40 who has been in private practice, minimal surgical background. Guaranteed $40,000 with 7% annual increase. 40 hour work week. Fringe benefits include one month paid vacation and time for post graduate study. Contact Mrs. Betty Foster, Vice President for Staff Services, Memorial Medical Center, P.O. Box 5280, Corpus Christi, Texas 78405. Telephone 512-884-4511.

OPHTHALMOLOGIST: To join well established man in area that is in need of another eye man. R. Wm. Carabelle, M.D., Eye Clinic Association, 3500 Catalina Court, Port Arthur, Texas 77640. Phone 713-985-4325.

ASSOCIATE FAMILY PRACTITIONER OR INTERNIST needed to join three established family practitioners. No financial outlay needed; reimbursed on basis of production. Adequate laboratory and x-ray facilities available. Mid-north side San Antonio. For further information write Ad-515, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST AND FAMILY PRACTITIONER NEEDED to associate with a two doctor group that is closely affiliated with a nine member specialty group. Location—West Texas—center of prosperous irrigated agriculture area. Excellent medical town of 20,000. Guaranteed income, future partnership with no investment. Contact E. O. Nichols, Jr., M.D., 715 Houston, Plainview, Texas. Phone 806-296-7425.

INTERNIST-GENERAL PRACTITIONER: Clinic, including lab and x-ray. Join surgeon and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Association, 9801 Katy Freeway, Houston, Texas 77024. Phone 713-468-4338.

INTERNISTS NEEDED as Chief of General Chest and Heart Care Units at a university affiliated 270 bed chest disease hospital in East Texas. Institution also engaged in active education and research activities. Salary negotiable. Contact Superintendent or Clinical Director, East Texas Chest Hospital, Box 2003, Tyler, Texas 75701. Phone 214-877-3451. Equal opportunity employer.

WANTED—INTERNIST for six man group in Central Texas town of approximately 12,000. Board certified or board eligible man preferred. Salary open. Please contact Ad-517, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIANS WANTED for care of mentally retarded at Travis State School, Austin, Texas 78767. Salary attractive. Write or phone the Superintendent or Medical Director, P.O. Box 430, Austin, Texas 78767; Phone 512-926-2410. An equal opportunity employer.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $8.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER WANTED—have new office space in private hospital, will negotiate guaranteed income. Excellent opportunity to build practice. General practitioners in organization cover each other on vacation and time off. Specialty staff provides full consultation needs. Pasadena Memorial Hospital, Roland Jones, Administrator; telephone 713-473-3311.

PHYSICIAN OWNED AND MANAGED HOSPITAL, 158 beds, has immediate opening for two general practitioners who are interested in practicing in a physician oriented community with guaranteed success. These are private practice opportunities. Only two offices remaining in a new and beautiful medical complex next to the hospital. The hospital will insure your medical success by offering a six months cash guarantee of $5,000 per month in addition to six months free rent. This is a rare opportunity for general practice physicians who would like to work in a GP community. Pasadena, Texas is a progressive city of 100,000 located as a suburb of Houston, Texas, near the Manned Space Craft Center; medical community enjoys high per capita earnings, open staff policies, and unlimited medical opportunities. For additional information write or call Richard Fly, Pasadena General Hospital, 1004 Seymour, Pasadena, Texas 77506. Phone 713-473-1771.

INTERNIST WANTED for East Texas city of 25,000. Special interest in hematology and chemotherapy desirable. Excellent practice facilities available. No investment required. Best recreational facilities in Texas available within 20 minutes drive. Please reply to Ad-518, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PROFESSIONALLY SATISFYING PRIVATE PRACTICES in Sweetwater, Houston, Dallas, Baytown and Hillsboro. Solo, associate and group in most fields. We are not an employment agency. We will put you in touch with the requesting physicians at no cost to you or them. Write with C.V. or call Sanford Smith, Hospital Management Corporation, 12421 East Freeway, P.O. Box 9836, Houston, Texas 77015. 713-455-1761.

PHYSICIAN WANTED: PHYSICAL MEDICINE AND REHABILITATION SPECIALIST: Board qualified or certified. Trained in electromyography for association in private practice in Beaumont, Texas. Telephone 713-832-2741.

NEEDED IMMEDIATELY: FAMILY PRACTITIONER. The community has three family practitioners, one will retire shortly. The community and surrounding counties serve over 15,000. The hospital has 77 beds and JCAH approved. The medical community is harmonious and stable. Contact: Edward G. Clark, 713-348-2631, Madison County Hospital, Box 698, Madisonville, Texas 77864.

STAFF PHYSICIAN (GP OR INTERNIST—GYN experience helpful), needed in University Health Service with enrollment over 20,000, Central Texas. 40 hrs. a week, excellent fringe benefits, competitive salary, congenial staff with new health center. Please reply to C. B. Goswick, Jr., M.D., Director, Student Health Services, Texas A&M University, College Station, Texas 77843.

CERTIFIED OR BOARD-ELIGIBLE INTERNISTS AND FAMILY PHYSICIANS are now being considered to join a busy, expanding practice in the Sun City. Large, new clinic adjacent to new 200-bed hospital. Guaranteed income—no upper limit, no investments; benefits, and partnership potential are available to selected applicants. Write: Ralf Sachs, P.O. Box 26338, El Paso, Texas 79926 or call collect 915-592-0201.

SOLO OR GROUP PRACTICE—on call every 5th night and every 5th weekend. Contact: Byron Terry, P.O. Box 247, Hughes Springs, Texas 75656, phone 214-639-2577 day, 214-639-2738 night; or Victor L. Harville, M.D., phone 214-645-2246 office, 214-656-2561 home.

FAMILY PRACTICE—OR SPECIALIST willing to practice some family medicine. Solo or associate with established doctor. Excellent potential of establishing as large a practice as desired. New, well-equipped, progressive hospital. Can assure excellent income. Ample office space available. Will consider constructing new clinic. Please reply to Ad-524, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INDUSTRIAL MEDICINE—PHYSICIAN-SURGEON WANTED to assume full responsibility for industrial medical program in well-established Texas manufacturing plant. Duties will include supervision of staff, dispensary, care of injured, first aid training, and general plant and employee health. Salary dependent upon individual. Company pays liberal fringe benefit program, furnishes excellent living quarters. Please send full details in first letter, including medical background, salary expected, date available, references. Answer in strictest confidence. Reply to Ad-525, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

URGENTLY NEED TWO INTERNISTS OR GENERAL PRACTITIONERS for staff physicians on the medical service, in 346-bed fully accredited GM&S Hospital located in the beautiful Texas Hill Country only 65 miles from San Antonio. Starting salary determined by training and experience. Excellent vacation and sick leave benefits, insurance, retirement, and other fringe benefits. Please write or call Chief of Staff, VA Hospital, Kerrville, Texas 78038; Telephone 512-896-2020, ext. 112. An equal employment opportunity employer.

GENERAL PRACTITIONER OR INTERNIST WANTED (Texas license required) for Student Health Physician. Annual salary with fringe benefits and pleasant association with three other physicians to care for students. Write to Dr. Robert A. Lloyd, Director of Student Health Center, North Texas State University, Denton, Texas 76203 or call 788-2331. We are an equal opportunity employer.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $22,500 to $29,500 with usual state benefits. Texas license or reciprocity required. Contact the Recruiting Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity/affirmative action employer.

CHILD PSYCHIATRY RESIDENCY may be taken before or after adult psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psycho-pharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities, and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed inpatient unit for children. Liaison with graduate schools, medical school, and community programs. Stipends: First year, $13,000; second year, $14,000; third year, $15,000; fourth year, $16,000. Contact Anthony P. Rousos, M.D., Director of Training & Research, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

PSYCHIATRIC RESIDENCY in approved 3-year program. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty and programs. Stipends with Texas license are $13,000, $14,000, and $15,000 per year. In addition, now offering residency in child psychiatry. For full information write to: Anthony P. Rousos, M.D., Director of Training & Research, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

ORTHOPEDIC SURGEON—Board certified, needed in 60-man multispecialty clinic. Some practice experience preferred. Opportunity to head department. Eligible for partnership in two years. Medical school affiliation. Excellent beginning salary and fringe benefits. Adjacent to Texas Medical Center. Write or call W. D. Seybold, M.D., Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025; Telephone 713-526-2671.

INTERNAL MEDICINE/PULMONARY DISEASES—Need fully trained, clinically oriented chest physician with some laboratory experience. Ideal position for physician with following interests: 1) clinical practice including in-patient and out-patient pulmonary consultations together with approximately 50% general medicine; 2) teaching medical students and housestaff; 3) hospital practice to include rounding with students and housestaff, teaching diagnostic and therapeutic procedures such as bronchoscopy, plural biopsy and thoracenteses, transthoracic pulmonary aspirations, transtracheal aspirations, needle biopsy of intrapulmonary masses, etc. 60-man clinic and satellites. Affiliated with medical school. Excellent fringe benefits. Partnership in two years. Interviewing expenses paid. Call or write J. A. Bakken, Administrator, Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025; Telephone 713-526-2671.

Situations Wanted

FULLY TRAINED ANESTHESIOLOGIST wanting to do general practice with limited anesthesia. Previous experience in industrial and aviation medicine. Prefer small to medium sized community, but would consider larger area in an aviation related practice. C. W. Davis, Jr., M.D., 3113 Parliament, Irving, Texas 75062.

OPHTHALMOLOGIST—31, married, completing university residency, June 1975. Desire solo, associate, or group opportunity in Houston area. Ronald D. Cox, M.D., 687 Watersedge Drive, Ann Arbor, Michigan 48105.

PHYSICIAN, 29, board certified, internal medicine-endocrinology, would like weekend work, part time. Can do general medicine and minor surgery. Prefer Central Texas, but will travel. Also consider locum tenens. Please reply to Ad-520, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ADMINISTRATIVE OR MEDICAL DIRECTOR position desired by 48 year old certified surgeon. Licensed in Texas. Married with family. Can furnish both professional and personal references. Reply to Ad-521, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST—Board certified; 44 years old. Would like to relocate in Texas. Interested in a small hospital or small group practice. Diagnosis primarily, but trained in therapy and isotopes. Income is secondary to working conditions and fringes. Interested in a small or moderate sized city. Please reply to Ad-522. *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST—Board certified in AP & CP seeking hospital appointment. Licensed in Texas. Please reply to Ad-523, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

POSITION WANTED—57 year old radiologist, certified in diagnosis, roentgen and radium therapy, and qualified in nuclear medicine, seeks full or part-time position with group or small hospital. Please reply to Arthur B. Shaul, M.D., Department of Radiology, Ashtabula General Hospital, Ashtabula, Ohio.

OTOLARYNGOLOGIST—32, married, military completed, seeks partnership or association with one or more otolaryngologists in Dallas area. Available July 1975. Please reply to Warren Katz, M.D., 114 Squire Hill Road, Upper Montclair, New Jersey 07043.

SWEDISH M.D.—36, married, two children. Swedish specialist in internal medicine and in geriatrics, should like to work for one/few years as a resident in internal medicine with geriatric connection or in a geriatric hospital. ECFMG certified. Dr. Ove Dehlin, Clinic II, Vasa Hospital, S-41133 Goteborg, Sweden.

BUSINESS OR CLINIC MANAGER: Desire employment with a clinic. Experience in all phases of business management and strong accounting background. Experience as business manager, assistant administrator and administrator of small hospitals. Resume sent on your request. Please reply to Ad-519, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

FOR LEASE—REASONABLE—2,800 sq. ft. medical office building, located across street from Kleberg County Hospital, Kingsville. Large, paved parking area, six examining rooms, two offices, waiting room, lab, business office. Ample room for two doctors. Town delightful, people warm and friendly. Trade area large, opportunities for success unlimited. Available January 1975. Your interest appreciated. Contact Ad-516, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTICE OR PEDIATRICS. Leaving practice for full time industrial practice. Take over practice in large one or two man office for lease and equipment. Terms on equipment. In nice coastal town with good hunting, fishing and 75-bed accredited hospital. Contact F. M. Logsdon, M.D., 605 N. Virginia Street, Port Lavaca, Texas 77979. Phone 512-552-3794 office; 512-552-6186 home.

FOR SALE—Have all equipment and furnishings needed for a two treatment room practice—including EKG machine and accessories. One year old Remington electric typewriter (business model), autoclave, electric adding machines, large assortment of SS instruments, two electro surgical units. Please contact John O. McGuire, M.D., 7711 Broadway, 13-C, San Antonio, Texas 78209.

ARLINGTON—In the middle of America's future and present. Two thousand feet of new modern office facilities will be available in October for one or two professional offices in a highly desirable medical-dental area. Ideal location for GP or specialist. Tom Clayton, DDS, 1702 West Park Row, Arlington, Texas 76013. 817-277-0431 or 817-274-4707. 455-1761.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counselling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

AMAZING INVESTMENT OPPORTUNITY. Permits the almost "instant" utilization of raw land. Combination four-unit dwelling, adaptable to any location, mountain, suburb or seashore. Delivered in fully finished single units, assembled on-site. For details write Otis International, 7540 LBJ, Suite 720, Dallas, Texas 75240 or call 214-233-6645.

COMPUTER MANAGER

Position open to develop operations with PDP 11 system. Bio-Medical and Minicomputer experience preferred.

Contact J. Ed Barnes or Herbert T. Davis:

Cancer Research
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1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

21

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9/21/74

Advertising Directory

Abbott	32
Ayerst Laboratories	36-37
Beverly Hills Hospital and Clinic	121
Blue Cross-Blue Shield of Texas	44-45
Burroughs Wellcome Company	49
Cancer Research and Treatment Center	143
Comatic Laboratories, Inc.	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
The Diagnostic Clinic of San Antonio, P.A.	122
Dorsey Laboratories	26
El Paso Psychiatric Clinic	46
Flint Laboratories	87
Russell Grace Insurance	46
Ives Laboratories, Inc.	15
Mead Johnson Laboratories	47, 123
Kelsey-Seybold Clinic	110
Eli Lilly and Company	52
McNeil Laboratories, Inc.	48
The Martin X-Ray and Radium Clinic	42
Medical Arts Clinic of Corsicana	109
The Medical Protective Company	125
Medicenter Psychiatric Hospital	122
Otis International	16
The Pharmaceutical Manufacturers Association	90-91
T. Rowe Price Growth Stock Fund, Inc.	42
The Prudential Insurance Company of America	9
Psychiatric Institute of Fort Worth	125
Radiology Associates of Fort Worth	109
Reed & Carnick	38
A. H. Robins Company	19-20
Roche Laboratories	1-2, 24-25, 30-31, 96-97, 128-130, 146-147
Roerig	16-17, 69-70
Scott and White Clinic	Back Cover
G. D. Searle & Co.	88-89
Seaview Hospital	28
Starlite Village Hospital	126
Surgical Mechanical Research, Inc.	42
Texas Medical Association	
Automobile Leasing Program	115
Conference on Medical Service and Practice Management	143
Memorial Library Fund	118
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	109
The Upjohn Company	4-5
Wallace Laboratories	28-29, 50-51
Warner-Chilcott	126-127
Wichita Falls Clinic-Hospital	126
World of Resorts	41

Physicians' Directory	131-140
Classified Advertisements	141-143

Editorials

MIRROR, MIRROR ON THE WALL, WHO NEEDS HELP THE MOST OF ALL?

A perusal of the obituary section of any medical journal tells the story: Dr. X, 56, cause of death, myocardial infarction; Dr. Y, 48, cause of death, cancer; Dr. Z, 52, cause of death, suicide.

Roughly 700 physicians, or the output of seven medical schools, is required each year to replace physicians lost to suicide, narcotic addiction, and alcoholism, according to James L. Grobe, MD, Phoenix, past president of the American Academy of Family Physicians.[1] Since we are more or less in the business of improving the odds in dismal situations, we may as well start with ours.

Being a physician in America shortens lives. We all know it, but too few of us within the profession are willing to do anything about it—even something as simple as having the yearly physical examination we advise for our patients. Still fewer physicians would consider seeking psychiatric counseling and care, although it is common knowledge that a medical career can produce unprecedented stresses and strains which are both emotional and physical. As a result, some doctors die. Others live lives of quiet desperation, unhappy with themselves, their families, and perhaps even their work.

The very personality traits that make for a good physician—the drives, the energies, the individual strengths and abilities—may make it hard for him or her to realize when stress is getting out of hand. It may also be harder for a physician to seek outside help when he needs it. The majority of physicians who do not reach suicide are forced to live with the heavy stress that is a typical occupational hazard. This stress can produce serious self-damage. It can be physical: ulcers, crippling headaches, heart trouble; or emotional: irritability, outbursts of temper, the dull empty feeling of depression, insomnia, fickle sexual activity, addiction . . . the list goes on.

Many kinds of stress-producing problems are peculiar to the medical profession. For example, some physicians are so wedded to the routines of their practices that they forget that that practice can be changeable. They don't consider alternate plans. So, when goals change or fade, the ensuing bitterness can be destructive. The physician may battle with his work, defy his patients, and fume at his organizations.

Another common medical career problem arises with the physician who spends all his energies on his first love—his practice—and neglects his wife and family. This physician emotionally isolates and insulates himself from his family. This neglect of family can lead not only to the deterioration of his own career, but to the deterioration of his family as well.

And how many 100-hours-a-week careers are really productive? Work like this can be a means of escape for a man who avoids facing sexual problems, teen-age guidance, community responsibilities or other duties about which he feels insecure. By the same token, drugs and alcohol offer no real escape from emotional problems and in fact, their use can prove disastrous.

Besides specific medical career problems, times of life harbor psychological pitfalls no matter what external circumstances may be. The younger man driving to get ahead is faced with realities which can stunt or destroy earlier dreams.

The middle aged man whose career has peaked faces awesome responsibilities and the need for adaptation. He may have so many problems and fears that he feels obligated to keep

them submerged. The midlife crisis can strike as early as the late 30s or early 40s, bringing with it a mixture of physical, chemical, and hormonal changes which still are not fully understood. Some people deny middle age, thinking and acting 30 or 31 when they really are 40 or 45. In the bargain, they can get a coronary and lose their family's consideration and understanding.

The older man has gone up the ladder as far as he can go. For the first time he may see a frightening retirement. Life has lost its allure, there's less drive, he begins to feel old. He misplaces his glasses. He's climbed no Alps, left no milestones for posterity. He may feel, and may be, unwanted.

Whatever the problem, at some stage the physician should shuck off his own pride and fear of discovery and seek help. The key element in knowing when to look for help is to listen to your own inner stirrings. When the intensity of the problem becomes too great to handle by yourself look for professional help.

Depression can be treated with antidepressant drugs. In addition, specialists agree that psychotherapy, or sometimes just a few sessions of talk, can be a great help. Others feel that an avocation is important, especially one that not only affords relaxation but also gives a feeling of achievement. One should not tell people what to do in this regard (you can't tell another person how to be happy), but the treatment is often simple. What would you do, for example, for a person who is allergic to strawberries? Just recommend a change of diet.

Less than one-fifth of physicians who should seek psychiatric care actually do so. It's no wonder the suicide rate is so high. Fortunately, attitudes are gradually changing. Psychiatry no longer has the ominous connotations it had for earlier generations. More and more physicians are seeking help for themselves and are being more tolerant of others who do so. Many third-party carriers will pay some or all of the costs. There are few good reasons to avoid seeking help when you need it.

A lay magazine type of personal checklist follows; two or three wrong answers and boy, do you need help! Of course, if it were one of your patients, you would refer him without question. Will you practice what you preach?

1. Do you insist on making every decision personally or can you delegate authority?

2. Is it easy for you to make firm decisions or do you back down and become unsure?

3. Do you really know yourself or do you wear emotional blinders?

4. Are you able to listen and learn from others or do you think only of what you are going to say next in a conversation?

5. Can you take criticism or do you become defensive and irritated?

6. Are you reasonably calm and controlled in dealing with others or do you habitually blow your stack when you are irritated?

7. Do you relate with others on a purely personal level and have at least two or three good friends, or are you an emotional loner—one of those precariously perched characters?

8. Are you able to forget your work in favor of your wife and family once the day's work is done, or do you emotionally isolate yourself from them too?

Lee F. Scarborough, MD, Austin.

Reference

1. Physician attrition, editorial. Massachusetts Physician 33:13 (July) 1974.

What's on your patient's face...

may be more important than his chief complaint

Patient P.T.* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electrosurgical procedures.

Patient P.T.* seen on 6/12/67, seven weeks after discontinuation of 5% FU cream. Reaction has subsided. Residual scarring not seen except that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.

*Data on file, Hoffman-La Roche Inc., Nutley, N. J.

The lesions on his face are solar/actinic— so-called "senile" keratoses... and they may be premalignant.

Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics. The typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.

Sequence of therapy— selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; this reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

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Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

Before prescribing, please consult complete product information, a summary of which follows:

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Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

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5% cream/solution...a Roche exclusive

Professional liability insurance among Executive Board concerns

When TMA's Executive Board met in Austin in mid-summer, items receiving greatest emphasis were professional liability insurance, PSRO, and a meeting with officers and members of the Texas Nurses Association.

A subject of grave and urgent concern, professional liability insurance, was discussed in depth by the Board of Trustees and officers prior to the Executive Board meeting. It was decided to provide adequate funds and personnel to embark upon an aggressive program to study the problems, find solutions, and determine methods to guarantee insurability of TMA members. Dr. George Alexander, president of Harris County Medical Society, appeared before the Executive Board with an excellent presentation of the current situation in Harris County. As a result of the discussion the president of TMA is appointing an ad hoc committee to perform this pressing and vital task.

Extensive discussions were held regarding PSRO, including a review of the TMA policy and the recently announced AMA policy position. Information was provided that a bill before Congress (HR 15090), introduced by Rep Omar Burleson of Texas, contains 19 provisions for revision and amendment to the PSRO law.

It was noted that a need existed to define the responsibilities of TMA and TMF in developing non-PSRO professional review, and a committee has been appointed to carry out the function of evaluating and coordinating the work of TMA and TMF.

The joint session with the members and officers of the Texas Nurses Association provided a fruitful exchange of ideas in several areas of common interest. These included activities of the joint practice commission, collective bargaining, institutional licensure and the foreign nurse situation. The purpose of the discussion was to achieve a greater understanding and liaison between leaders of the two organizations. Thorough and frank exchanges provided a basis for increased communication and cooperation between the two groups.

A status report on the $100 assessment indicates an excellent response by the membership. An interesting development was an encouraging note, along with $200, received from Dr. Richard Albert of Alice. We have received numerous other communications applauding our actions in regard to PSRO, and we shall continue our efforts.

E. W. Schmidt, M. D.

E. W. Schmidt, President,
Texas Medical Association.

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TexasMedicine

Neurosurgery and relief of pain & addiction

Guide to thyroid function tests

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- against susceptible strains of the common urinary tract pathogens, usually *E. coli, Klebsiella-Enterobacter, Proteus mirabilis,* and, less frequently, indole-positive proteus species.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Enterobacter, Proteus mirabilis,* and, less frequently, indole-positive proteus species).

Note: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in chronic and recurrent urinary tract infections.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia in elderly patients on diuretics, primarily thiazides. Sore throat, fever, pallor or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. Data are insufficient to recommend use in infants and children under 12.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, allergy or bronchial asthma; and in those with glucose-6-phosphate dehydrogenase deficiency, where hemolysis may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12.

Usual adult dosage: Two tablets b.i.d. for 10 to 14 days. For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

Supplied: Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 1000; Prescription Paks of 40, available singly and in trays of 10.

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Contents

SCIENTIFIC ARTICLES

49 Abolition of opiate hunger in humans following bilateral anterior cingulotomy
Dr. Timothy Sharma

53 Neurosurgical relief of pain: Recent developments
Dr. Robert H. Wilkins

62 Compensation and success of lumbar disc surgery: A cohort study
Dr. W. Robert Hudgins

66 Audiovestibular findings with cervical spine trauma
Dr. Jerome Kosoy;
Dr. Arthur L. Glassman

77 Uses and abuses of thyroid function tests
Dr. Lloyd N. Gilliland, Jr.;
Dr. Robert W. Collison

90 Spectrum of acute glomerulonephritis
Dr. Joseph C. Dougherty;
Dr. George A. Bannayan;
Dr. Michael J. Sweeney

EDITORIALS

142 Delegates need your views before November meeting
Dr. Jack B. Lee

142 Nurse practitioner: A nurse by any other name
Ruth F. Stewart, RN

146 As I read my mail . . .
Dr. E. W. Schmidt

FEATURE

98 Public hearing elicits views on role of acupuncture in Texas

NEWS

6 Recommendations on future of medical, dental education

10 Manual available

10 Examiners amend rules on foreign grads

10 TMA travel

11 Health survey

11 EMS handbook

12 House of Delegates to meet

12 Assessment

12 Ramirez appointed

16 Continuing education directory

16 Staph resistant to penicillin

18 Annual Session

18 Baylor Med designated research center

22 AMA-ERF scholarships

22 Health specialists graduate

24 Certifying board meets

DEPARTMENTS

25 Capital Comments

34 Coming Meetings

41 Continuing Education

46 Information for Authors

106 Legal Protection: Facts You Should Know

108 Medicine and the Law

113 Medicine in Literature

114 Medical Newsmakers

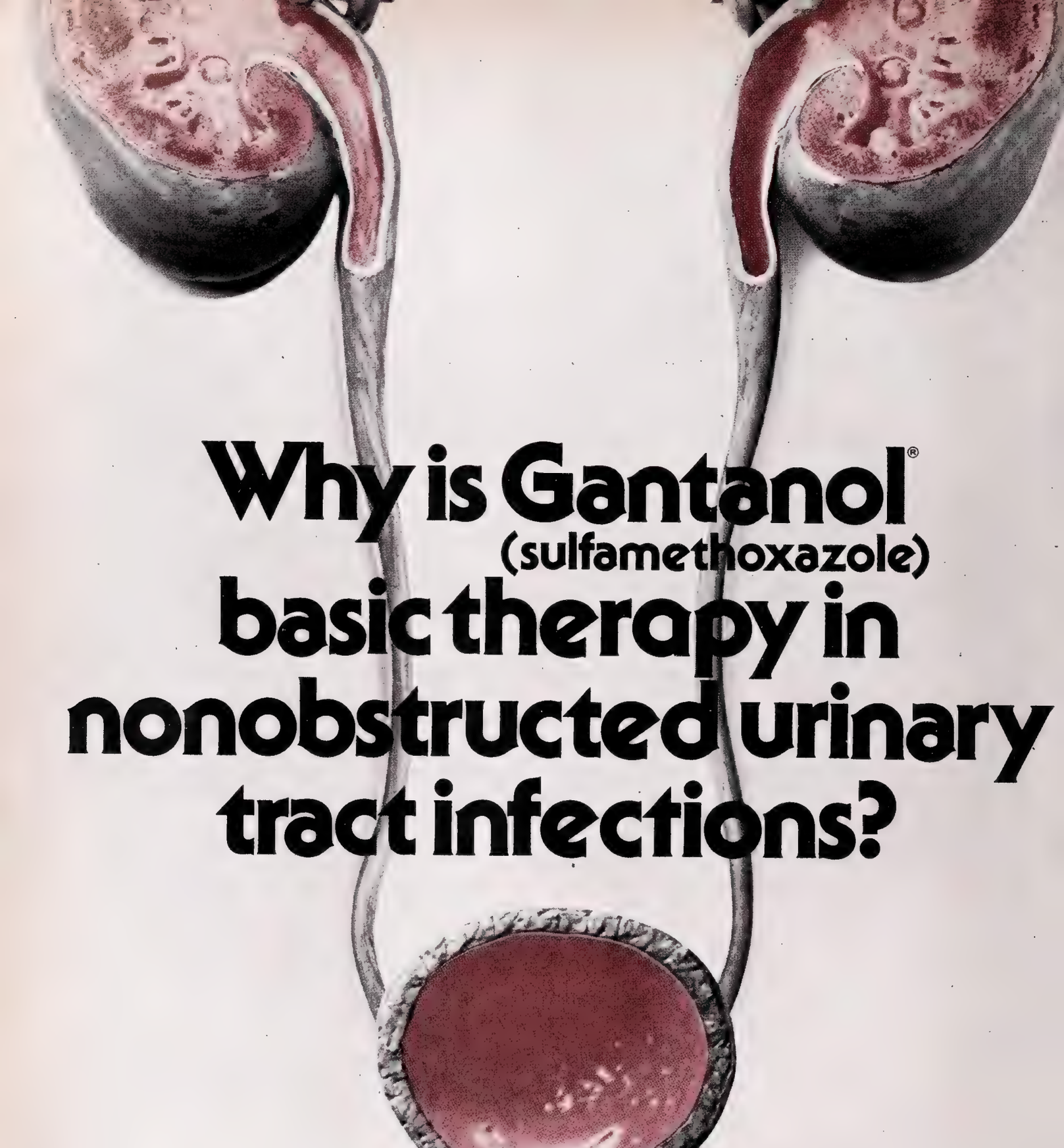
116 Recent Deaths

ON THE COVER

In November there will be articles about energy, inflation, and price controls; laser surgery in otolaryngology; erosion of the splenic artery and colon by a pancreatic pseudocyst; standard versus experimental surgical procedures in treatment of duodenal ulcer; early nonejection systolic clicks; and diagnosis and management of renal calculi.

NEXT MONTH

When pain turns life into a jagged nightmare and conservative measures give no relief, the attending physician may decide that surgical treatment is justified. An incidental side effect may be the abolition of opiate drug hunger, as described in the article beginning on page 49. Recent developments in neurosurgical relief of pain are discussed in the article that begins on page 53.



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Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, pur-

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pura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

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NEWS

Coordinating board committee devising recommendations regarding future of medical, dental education

Tentative recommendations regarding the future of medical and dental education in Texas have been made by the Advisory Committee on Medical and Dental Education of the Coordinating Board for the Texas College and University System.

A final vote by committee members on the proposed recommendations was due in late September. It was expected that the committee would submit the recommendations for consideration by the coordinating board at the board's Oct 18 meeting.

Manpower supply

In the preliminary conclusions of Aug 24, the advisory committee stated that no new medical or dental schools are recommended at this time. The panel said that the state will be able to meet current demands for medical and dental manpower if the trends of the past six years continue and the presently approved medical and dental schools are expanded to their currently approved optimum capacities.

The committee advised that medical education, undergraduate and graduate, should be planned to decrease significantly dependence upon foreign medical schools for provision of health care within the state.

Primary care

The committee endorsed increased state support to continue augmentation of primary care education in all Texas medical schools for undergraduate medical students and resident physicians in hospitals and other clinical facilities.

On the subject of distribution of medical and dental manpower, the advisory group recommended immediate funding for House Bill 683,

the State Rural Medical Education Act, passed by the 63rd Legislature. The bill provides for loans, grants, or scholarships for those desiring to study medicine and agreeing to practice in rural areas.

The proposals also included suggestions for other funding methods and information programs to encourage physicians to practice in areas of manpower shortages in Texas.

Admissions

The committee advocated the development and validation of tests for measurement of non-cognitive attributes of medical and dental school applicants. The group stated that it recognized that the "greatest need in health professions at this time is for people-oriented, service-dedicated practitioners." The recommendations also pointed out the need for active recruitment of women and minority group applicants to medical and dental schools.

Expansion of counseling activities was urged by the committee. Four counseling activities were cited as goals: 1) coordination between high school and college counselors; 2) identification of potentially successful students; 3) providing alternative career choices for less qualified students who are interested in health professions; and 4) expansion of information exchanges and discussion programs, already established on a voluntary basis, between admissions personnel of health professional schools and undergraduate counselors. The committee stated, "The major importance of counseling of premedical and predental students in universities and colleges should be further recognized in time allocation and sufficient funding for such counselor services."

The committee proposed the use of instructional techniques and support services to increase the probability of minority students and rural students successfully meeting the academic and emotional demands of medical and dental education. These programs would focus at accommodating different rates of learning, increasing reading and

NEWS

study skills, and overcoming deficiencies in academic preparation.
The establishment of other support services was advised by the committee. Among these were tutorial assistance, enrichment programs, loan programs, increased financial assistance, equipment and supplies, and others.
Efforts were endorsed to prepare and recruit women and minority group members for instructional positions in medical and dental institutions.

Curricula

According to the proposed recommendations, maintenance of health and prevention of illness, as well as treatment of disease, should be given increasing emphasis in the curricula of medical and dental colleges. Increased attention was urged to be given to the humanities, behavioral, and social sciences both in premedical and predental education and through additional course offerings in medical and dental colleges.
Other suggestions included the development of modular curricula at the honors level for premedical and predental students. Also encouraged was the development of open curricula with students as participants at various levels of health care delivery systems. This open curricula should include economic utilization of existing resources, placement of health manpower where needed, modular self-directed approaches for students to program their progress at their own rate and ability, and performance objective identified for each phase of the curriculum.
The advisory committee advocated that each medical and dental school in Texas should include planned and state-funded programs of research in the various areas deemed essential by the medical and dental institutions. Also recommended was the organization and financing of instructional development teams. Alternative educational methods, including self-instructional packages, were named as means to be explored to reduce investments in physical plants and increase efficiency in use of classrooms and other facilities.
The committee stated that financial support should be made available for the development of cooperative sharing of information and materials for the advancement of teaching and research programs in all Texas health science education centers.
Final recommendations on curricula and methodologies concerned continuing education. According to the committee's report, continuing education programs especially designed for physicians and dentists should be expanded and/or offered by each health professions school. The report also said that such continuing education programs should be taught by faculty and support personnel from health science educational centers in all regions of the state.

Future planning

The advisory committee suggested that the present report be reexamined no later than 1978 in light of possible increase or decrease in demand and utilization of medical and dental service, the number and scope of prepayment plans, including national health care programs, and unpredictable population shifts in Texas.

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NEWS

Assessing health needs topic of manual

Communities can now apply "think tank" forecasting techniques to the study of their own local health care needs. A new publication, *Manual for Applying the Delphi Method to Assessing Community Health Care Needs,* is available to community representatives through the Regional Medical Program of Texas (RMPT).

The manual is one product of an attempt to use a formal method, the Delphi, to probe people's opinions concerning community health care.

The Delphi method is a means of generating input to decision making from individuals with relevant experience, knowledge, and opinions in some area of concern. The goal of the method is to reconcile different, often conflicting, opinions into a meaningful consensus that forms a basis for decision making.

The manual may be obtained from RMPT, 4200 N Lamar Blvd, Room 200, Austin, 78756.

Examiners amend rules regarding foreign grads

In its Aug 17 meeting in Austin, the Texas State Board of Medical Examiners amended the rules and regulations regarding examination and reciprocity of foreign graduate applicants.

The amendment reads, "Not withstanding other requirements of this section for admission to examination of foreign medical graduates, the Texas State Board of Medical Examiners will admit to examination for Texas licensure those Texas residents who:

1) Present to the state board a certificate of completion of their didactic work required by their medical school or a diploma issued by their medical school setting forth successful completion of all didactic work required by such school;

2) Evidence satisfactory to the board of successful completion of one year's supervised clinical training (sometimes called the 'Fifth Pathway') as defined by the American Medical Association Council on Medical Education, and approved by the Texas State Board of Medical Examiners;

3) Present proof satisfactory to the board that the applicant has passed the examination given by the Educational Council for Foreign Medical Graduates; and

4) Present evidence satisfactory to the board that the applicant has completed, in an accredited American university or college, undergraduate premedical work of the quality acceptable for matriculation in an approved Texas medical school."

Travel adventures await TMA members

A world of travel adventure awaits TMA members and families who will be participating in the seven 1975 Association sponsored tours.

The two-week trips, approved by the Board of Trustees, include an African Adventure, departing Jan 22. Stops are planned for Rabat and Casablanca, Morocco; and Nairobi, Kenya.

On March 3 the South American Air-Sea Cruise will depart for ports of call Salvador, Rio de Janeiro, Santos/Sao Paulo, Mar del Plata, Montevideo, and Buenos Aires.

Three countries are on the itinerary for the British Isles plus Amsterdam Adventure. Travelers will visit Dublin, Ireland; Amsterdam, Holland; and London, England. Two departures are scheduled for June 4 and 8.

Two departure dates are also slated for the Balkan Adventure on July 31 and Aug 4. The tour will stop in Bucharest, Romania; Istanbul, Turkey; and Dubrovnik, Yugoslavia.

A Holy Land Air-Sea Cruise will wrap-up the TMA travel season with departure set for Oct 13. Ports of call include Athens, Mykonos, Crete, Alex-

andria (Egypt), Beirut, Haifa, and Rhodes.
For more information on TMA travel programs, interested parties should contact Mrs. Jeanette Prentice, travel coordinator, Texas Medical Association, 1801 N Lamar Blvd, Austin 78701.

Beethoven a cure?

Classical music is being played in parts of Europe for medicinal purposes, according to the Health Insurance Institute.
The melodies, played through a device developed by Guy Allaire of France, breaks down cell tissue by transforming the sounds into direct vibraticns.
The patient listens through earphones while the tunes are further relayed through electrodes attached to the body.
In Rome, surgeon Geotano Zappalo has been using Bach fugues to treat indigestion.
It has also been found that Mozart is an ideal choice when tackling rheumatism; Handel helps "broken hearts" and other disturbed emotional states.
What about Beethoven? He's considered good for hernia.
And Schubert? His music is doing what many classical musical haters claim this type of music has done for them for years—its being used to cure the problem of insomnia.

Health survey scheduled for two Texas counties

Edward B. Perrin, PhD, director of the National Center for Health Statistics, has announced that the US Public Health Service will be conducting a health examination survey in Hunt and Rains Counties.

The initial phase will begin on Oct 21 with interviewers from the US Bureau of Census calling on selected households in those counties to obtain certain demographic information and to identify and select about 120 persons for the examination.

Examinations will be conducted from Oct 31-Nov 15 in the survey's mobile examination center.

The current survey is designed to enable the US Public Health Service to make accurate estimates of the prevalence of chronic pulmonary diseases, disabling arthritis of the hip or knee, and cardiovascular diseases.

All information collected is held in strict confidence. The persons selected for the sample are asked to sign a release permitting reports of findings to be sent directly to their physicians after which the significant clinical or laboratory data are forwarded. No treatments or medical advice are given to the examiners by the examining staff.

Questions about the survey may be directed to Charles Gallese, National Center for Health Statistics, Rockville, Md 20852, telephone (301) 443-1626.

Emergency system handbook offered to small, rural areas

A new handbook on emergency medical services (EMS) is now available to small communities or rural areas that want to launch EMS systems locally.
The guide, *Planning and Implementing Community and County Emergency Medical Services Systems,* was prepared by the Southwest Research Institute through a Regional Medical Program of Texas (RMPT) grant.

The handbook helps individuals or organizations plan and implement an EMS system in a small or rural community. The guide assists in deter-

mining what kind of EMS a community wants and can afford and emphasizes employee and equipment needs.
The guide is available through the RMPT offices, 4200 N Lamar, Suite 200, Austin 78756.

NEWS

House of Delegates to meet

The fall session of the House of Delegates of the Texas Medical Association has been scheduled for Nov 2 and 3 in Austin.
The first session of the House will convene at 8 am Nov 2 in the Sheraton-Crest Hotel. Reference committees will meet at 9 am. The House will reconvene at 8 am Nov 3 to act upon reference committee reports.
Handbooks will be mailed to delegates in early October.

Assessment due Oct 1

Problems relating to malpractice and professional liability insurance have been given a high priority as a part of the action programs being financed through the $100 special assessment of Texas Medical Association members.
Members who have not paid the assessment by Oct 1 shall automatically be considered delinquent. A delinquent member shall not have the privileges of voting, holding office, or attending annual session.
A delinquent member may be reinstated as a member in good standing upon payment of the assessment, provided payment is made by Dec 31 of the current year.
The assessment will be used for activities which are consistent with TMA's goal of providing the best possible medical care to the people of Texas.
A special ad hoc committee was recently appointed to devote attention to the problems of rapidly increasing premiums, the rising number of malpractice suits in Texas, and the availability of coverage for members of the Association. A portion of the assessment will be utilized to provide the necessary funding for the study and for other programs of action in the interest of TMA members.
The Association also has launched actions to counter interference by third parties, to voice concern over objectionable government programs, and to fight for a free, unshackled medical profession. Activities include informational, legislative, and legal campaigns.

Brochures available to MDs

The Texas Association for Retarded Citizens is offering two brochures free of charge to physicians.
"For Your Baby's Sake" is a pamphlet focusing on prenatal and infant care.
The second flyer, "Help Him Become All He Can," is designed for parents of mentally retarded children. The pamphlet contains guidelines for helping retarded children to develop their full potential.
The brochures may be obtained from the Texas Association for Retarded Citizens, 833 Houston, Austin 78756.

Ramirez appointed to TV advisory group

Dr. Mario Ramirez of Roma has been appointed to the advisory council for "Feeling Good," the new adult television series on health.
The series will premiere Nov 20 on the 250 stations of the Public Broadcasting Service in prime evening time.
The first program produced for adults by the Children's Television Workshop, "Feeling Good" will utilize a variety of TV techniques including song, dance, documentary, and situation comedy. Subjects will range from nutrition to exercise and from hypertension to breast self-examination.
The primary target audience for the series is young parents who play a major role in influencing the health of

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Tell him the truth. A hospital is a place where people go to get well. In the process, they see some very interesting and exciting new kinds of things. Scientific equipment. Machines straight out of TV shows. Big high beds with all kinds of attachments to them, and cranks you can turn to get more comfortable. Some of the new things will hurt a little bit, and a sensible kid will holler when stuck with a needle. And a sensible kid will also try to hold his arm very still.

And after enough days have passed, he will go home all well again.

Today, many hospitals are helping parents prepare children for the hospital experience. Upon admission these advanced institutions help the children make friends with the doctors and nurses, and some of them ask parents to remain with the child day and night.

Older children can be told in plain terms what to expect. And if, for example, they will have to endure pain, they can be told why it is necessary.

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NEWS

their immediate families. Of particular concern are the health problems and attitudes of low income families.

Among his many activities, Dr. Ramirez is chairman of the TMA Committee on Health Care of the Poor and vice chairman of that committee in the American Medical Association.

Directory deadline approaches for continuing education

The final deadline for the submission of course and meeting listings for the 1975 Continuing Education Directory for Texas Physicians is Oct 10.

The directory is scheduled for its fifth annual publication in the January, 1975 issue of *Texas Medicine*. The 1974 directory contained over 150 listings of continuing education courses and scientific medical meetings. A 25% increase in the number of listings is anticipated for the upcoming directory.

Hospitals, schools, medical societies, and others wishing to have courses and meetings included in the 1975 directory should contact the *Texas Medicine* office, 1801 N Lamar Blvd, Austin 78701.

"Surprise, surprise. You are still in the child bearing age."

Common staph infections resistant to penicillin

The common street variety of staphylococcal infections has developed resistance to the commonly used drug treatment, penicillin G, reports an article in the *Journal of the American Medical Association* which urges doctors to switch to other drugs in treating this infection. The report appears in the Aug 19 issue.

It had been known for some years that the staph strains circulating in hospitals had become resistant to penicillin G, but the article reports that many physicians had assumed that penicillin G was still useful to treat common staph infections seen in the office or in outpatient clinics.

A Washington, DC study, utilizing a sensitive new test for drug-resistant staph, found that this is no longer true.

The Washington research group tested 133 children seen as outpatients or in private practice for resistance to penicillin G. Resistance to staph strains common in the community was 84%. Resistance to hospital strains was 95%.

According to the report, the resistance has developed in the last 20 years. It quotes studies showing that in 1957 the resistance was 16%, and ten years later it had risen to 38%. However, it is possible that the less sensitive tests of those years did not reveal the true figures.

The report notes that many laboratories still are not using the new, ultra-sensitive test, known as the Kirby-Bauer technique. Only seven of 14 hospitals polled in the Washington area used the new test. Thus, "many strains of staphylococci will be reported as susceptible while in reality they are resistant."

Other effective drugs are available. The report states, "The routine use of dicloxacillin, a cephalosporin, or clindamycin would be preferable therapy

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since all three agents are 98 to 100% effective. Erythromycin can also be regarded as a useful agent, although approximately 8% of staph strains are resistant to this antibiotic."
The report is by Drs. Sydney Ross, William Rodriguez, Guido Controni, and Waheed Kahn.

NEWS

A problem in switching to more effective drugs is the price, according to Dr. Jerome O. Klein, of Boston City Hospital, in an accompanying editorial in the same issue of the journal.
Dr. Klein points out that the alternate drugs cost up to ten times as much as penicillin G.
He said, "The tenfold increase in price cannot be ignored. Yet, the cost to the patient for inappropriate therapy is also high."

Annual Session plans underway for San Antonio

Plans are underway for the Texas Medical Association's 1975 Annual Session May 1-4 in San Antonio.
Departing from the traditional format of recent annual sessions, the 1975 scientific and business meetings will be staged under one roof at the San Antonio Convention Center. This centralization will be possible as a result of recent expansion of the convention center and will allow physicians to participate more fully in session events.
Meetings of boards, councils, and committees will be scheduled in the St. Anthony Hotel. The Hilton Palacio del Rio and the Menger will serve as headquarters hotels for physicians participating in the scientific sessions. The Woman's Auxiliary will hold its convention at La Mansion. Scientific programs for the 1975 session are being arranged by program chairmen of 19 scientific sections, 36 specialty and related medical organizations, and eight TMA committees.
Special programs will feature topics in the areas of school health, cancer, cardiovascular diseases, trauma and emergency medical services, maternal health, medicine and religion, genetic counseling, sports medicine, rheumatism, and family practice.
A few of the speakers who have been secured to date include Dr. James L. German, research professor of medicine and human genetics, department of pediatrics, Cornell Medical School; Dr. Donald L. Cooper, director, Oklahoma State University Student Hospital and Clinic, Stillwater; Dr. Joseph De Lay Godfrey, team physician, Buffalo Bills Professional Football Club; and Emory Bellard, director of athletics and head football coach, Texas A&M University.

Board issues 508 licenses

A total of 508 medical licenses were issued by the Texas State Board of Medical Examiners, meeting in Austin Aug 16-18.
Of this number, 433 were from Texas schools, 60 were foreign graduates, and 15 were from out-of-state schools. The total number of failures was 50.
In addition, there were 200 reciprocity applicants approved for licensure. Of these, 44 were foreign graduates. Nine duplicate licenses were issued.

Baylor Med designated national research center

Baylor College of Medicine has been designated the National Heart and Blood Vessel Research and Demonstration Center and has been awarded a grant totaling $13.3 million over a five-year period by the National Heart and Lung Institute, National Institutes of Health.
Funding of the Baylor Center, which is expected to begin Jan 1, 1975, will provide for personnel, operations, and equipment costs. No construction money is included in the award. More than 25 medical institutions throughout the United States competed for

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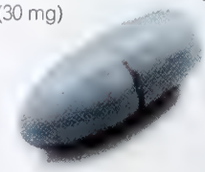

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the center designation.
Dr. Michael E. DeBakey, Baylor president, will serve as director of the center and co-principal investigator. Dr. Antonio M. Gotto, Baylor professor of medicine and biochemistry, will also serve as co-principal investigator and scientific director of the center.
The major goals of Baylor's Heart and Blood Vessel Center are first, to integrate basic and clinical research in cardiovascular disease while sustaining a climate of medical excellence. Second, the center will provide public and professional education regarding the prevention of cardiovascular disease and the importance of early detection and treatment. Third, the center will seek to rapidly translate the findings of basic and clinical research into methodologies that will improve cardiovascular health care delivery and affect the standards of health practices in the community.
To accomplish these goals, the Baylor center has been organized into three major divisions: basic research, education, and control and demonstration.
The basic research division will focus on the study of atherosclerosis (the blockage of the flow of blood through the artery system), the major cause of heart disease. Seven sections in the division will conduct investigations on the causes, prevention, and treatment of atherosclerosis and its complications.
The division of education will develop a more effective use of existing information and education systems to prevent and control cardiovascular diseases through a four-pronged approach involving public education, secondary and university education, training, and continuing education.
The division of demonstration and control will implement and measure the effectiveness of cardiovascular prevention and treatment programs in the community. Advances resulting from research conducted within the Baylor Heart and Blood Vessel Center and elsewhere will be brought to the public through these demonstration programs. Five programs relating to community clinics, emergency medicine, smoking, diet, and laboratory standardization will be started initially.
The center will involve a number of independent Houston-area investigators and agencies to meet the goals.

NEWS

Health insurance benefits set record high in 1973

Insurance companies paid out a record $11.3 billion in health insurance benefits in 1973, the Health Insurance Institute reported in a July press release.
The benefit figure, which averaged out to more than $31 million a day, was $708 million higher than in 1972, nearly a 7% increase according to the Institute.
Overall, all private insuring organizations, including Blue Cross, Blue Shield, and other plans, paid an estimated $23 billion last year, or about $62 million daily.
At the present rate of increase, it is estimated that by next year the public will be receiving over $2 billion a month in private health insurance benefits, exclusive of government payments through Medicare and Medicaid.
The 1973 figures include more than $3.9 billion paid out in hospital expense benefits, more than $3.5 billion in major medical expense benefits, and $2.1 billion in disability income. Other payments included nearly $1 billion in surgical expense benefits, more than $500 million in medical expense benefits, and more than $238 million in dental expense benefits.
More than $864 million in Part B Medicare benefits were paid out in 1973 by the insurance companies acting as fiscal intermediaries for the government. This figure represents a 9% increase over the previous year.

NEWS

Medical scholarships offered through AMA-ERF

A 20-year $480,000 scholarship program has been inaugurated by the American Medical Association Education and Research Foundation (AMA-ERF) with the naming of the first 12 senior medical students as Rock Sleyster Scholars. Each will receive a $2,000 grant for the 1974-75 school year.

Twelve one-year scholarships, totaling $24,000, will be awarded during each of the 20 years to medical students on the basis of scholarship, financial need, and demonstrated interest in psychiatry, according to AMA-ERF president, Dr. Kenneth C. Sawyer.

Dr. Sawyer said the program was made possible through a $380,000 bequest of the late Mrs. Clara S. Sleyster, of Shorewood, Wis, which established a memorial fund to honor her husband, Dr. Rock Sleyster, president of the AMA in 1939-40.

The Rock Sleyster Memorial Fund provides that scholarships be awarded to US citizens enrolled in AMA-approved American or Canadian medical schools that grant MD degrees. Each school is invited to submit one nominee annually, normally a student about to enter the final year of the curriculum. The nominees are evaluated by a committee of medical educators working with the AMA Department of Undergraduate Medical Education.

Grant awarded to UTMB physiologists

A three year grant from the National Heart and Lung Institute, National Institutes of Health, has been awarded to physiologists at The University of Texas Medical Branch to investigate the role of a plasma inhibitor in blood which counteracts dissolving of unwanted blood clots.

According to principal investigator Dr. Luddo B. Nanninga, research professor of physiology, the $84,546 grant allows for in-depth research in the area of the fibrinolytic system (clot dissolving) with co-investigator Dr. M. Mason Guest, Ashbel Smith Professor of Physiology.

Both scientists have been conducting research to learn about the mechanisms for dissolving fibrin, a substance which helps form blood clots. Their research has also focused on measuring the degree to which this plasma inhibitor in the blood suppresses another substance, the plasma activator, of the fibrinolytic system.

Health specialists graduate

The University of Texas School of Allied Health Sciences at Dallas graduated the largest class in its four-year history Aug 18, including 11 physician's assistants.

Eighty-eight health specialists received bachelor of science degrees or professional certificates from the school.

A total of 76 BS degrees were awarded. Others were in medical technology, physical therapy, rehabilitation science, and instructional media. Professional certification was presented to 12 students completing programs in dietetics, rehabilitation science, and physical therapy.

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NEWS

Certifying board meets

Announcement that more than 1,700 family physicians have applied to take the October board examination, a reaffirmation of the 1978 cutoff date for practice-eligible candidates, a statement on "lateral mobility" among primary care residencies, and a definition of "board eligibility" were highlights of the July meeting of the American Board of Family Practice, the specialty's board.

According to Dr. Arthur Nelson, ABFP president, the heavy registration of applicants resulted from an increase in residency graduates and an apparent "recognition on the part of Academy of Family Physicians members that board certification will affect their future."

The directors upheld an earlier decision that 1978 would mark the end of a practice-eligible category of diplomate candidates. However, it was decided to change the effective date from Jan 1 to July 1 of that year.

Also adopted was part of a statement on lateral mobility, a concept aimed at permitting interchange, after the first year, between family practice residencies and residencies in internal medicine, pediatrics, and possibly other primary care specialties. The board reaffirmed its position that all three years of the family practice residency should be under direct supervision of the director and his faculty. The statement stressed the importance of the resident's having a learning experience in a family practice center throughout all three years.

The board clarified the term "board eligible" as applied to the family practice specialty. It determined that a doctor is board eligible only if he has satisfied the basic requirements of submitting credentials, paying the fee, and being judged by ABFP as qualified to sit for the examination. This eligibility is valid only until the time of the upcoming examination, or, if the candidate cannot because of extenuating circumstances (agreeable to ABFP) take the upcoming exam, it is valid only until the next following exam. This applies to both practice eligible and residency eligible candidates.

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment media	Original price 9-30-68	Current adjusted price 7-31-74	% Change from 9-30-68
Mercantile National Bank Stock Fund	$10.25	$ 8.23	−19.71
Loomis-Sayles Capital Development Fund	14.20	10.83	−23.73
T. Rowe Price Growth Stock Fund[2]	25.93	10.87	−16.19
Loomis-Sayles Mutual Fund	16.82	15.33	− 8.86
Stein Roe & Farnham Balanced Fund	23.34	21.01	− 9.98
Mercantile Bank Fixed Income Fund	10.00	10.57	+ 5.70
Standard & Poor 500 Stock Average	101.34	79.31	−21.74
Dow Jones Industrial Average	935.79	757.43	−19.06

[1]Includes accumulated dividends and capital gains since 1968.

[2]Stock split two for one, May, 1973.

CAPITAL COMMENTS

AUSTIN: HEARINGS CONDUCTED ON HEALTH DELIVERY SYSTEMS. The Texas Senate and House Joint Subcommittee on Public Health held a hearing in San Antonio Aug 15-16 to explore "alternative health care delivery systems such as foundations for medical care, prepaid group practice, and health maintenance organizations." The subcommittee has also appointed an advisory board to assist in deliberations. Among members of the advisory board are TMA members Dr. Harold R. High, Cuero, and Dr. Richard R. Hicks, Jr., San Antonio.

Testifying before the subcommittee were John Wassam, Urban Coalition of Metropolitan San Antonio; Elenor Young, PhD, The University of Texas Medical School at San Antonio; Bernard Rappaport, executive director, Bexar County Medical Foundation; Joe Christie, chairman, State Board of Insurance; Ace Pickens, TMA assistant general counsel; Jackee Cox, free lance writer; Al Notzon III, executive director, Alamo Area Council of Governments; Adelia Navarro, Mexican-American Unity Council; O. Ray Hurst, Texas Hospital Association; and Harry Hubbard, president, AFL-CIO of Texas.

Participants discussed alternative methods of health care delivery in relationship to their respective organizations and/or fields of interest.

In particular, Mr. Pickens explained TMA's position with reference to alternative health delivery systems. He discussed the Association's policy stand prior to the last session of the Legislature, during the last session of the Legislature, and as it now exists.

In reference to HMO guidelines, issued by the State Board of Insurance and recently ruled invalid by the attorney general of Texas, Mr. Christie acknowledged that the current Insurance Code was not designed for this type of organization and agreed that the guidelines had been cumbersome, unworkable, unduly restrictive, and would not have served to provide the most economical and feasible structure for the operation of an HMO.

The joint subcommittee plans additional hearings in Lubbock with primary emphasis on rural health care, in the Rio Grande Valley with primary emphasis on health care for the poor, and in Dallas and Houston.

WASHINGTON: CONGRESS PASSES PENSION BILL. The Employee Benefits Security Act, HR 2, has been signed by the President. The bill allows individuals to contribute 15% of their income to a maximum of $7,500 annually, whichever is less, under the Keogh Plan. Individuals participating in professional associations are allowed to set aside an amount which would result in pension equal to $75,000 per year or 100% of the participant's average compensation for the high three years of income, whichever is larger.

WASHINGTON: NHI CONSIDERATION DEFERRED. The House Committee on Ways and Means, after conducting more than a week of sessions attempting to develop a compromise national health insurance bill, has now deferred action on

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

the subject. It appears likely that no legislation will be passed in the present Congress, although the committee's staff has been instructed to continue its efforts to formulate alternative health insurance provisions to be considered by the committee.

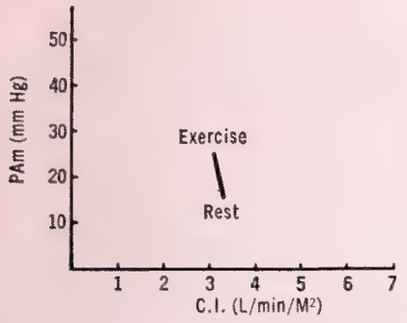
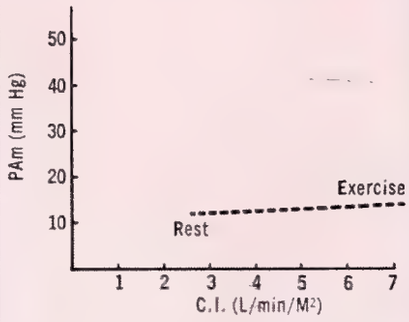
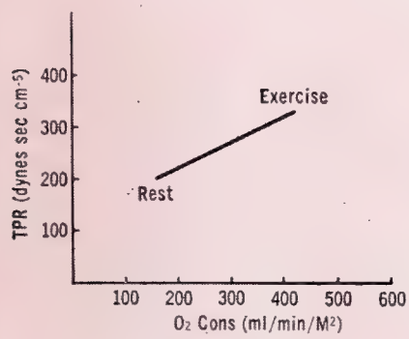
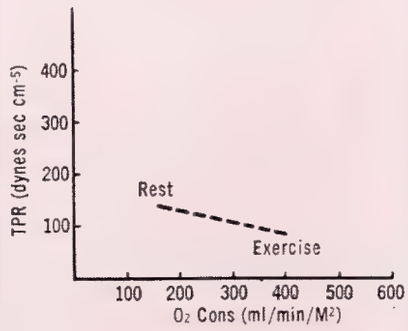
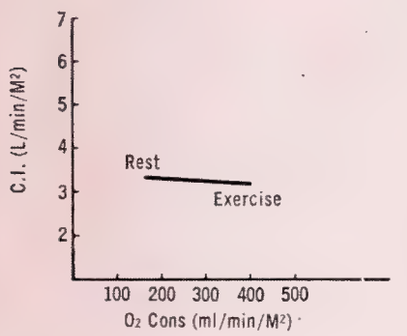
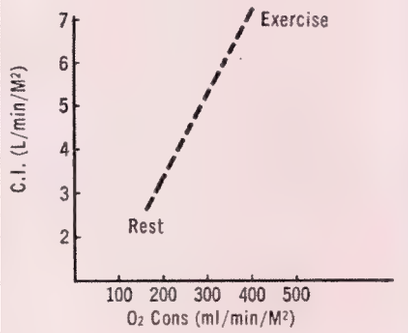
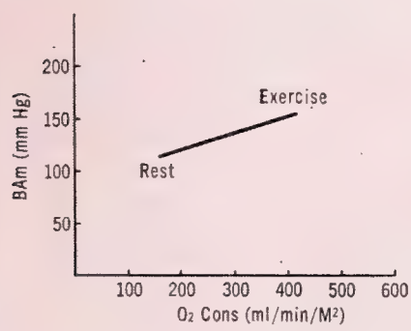
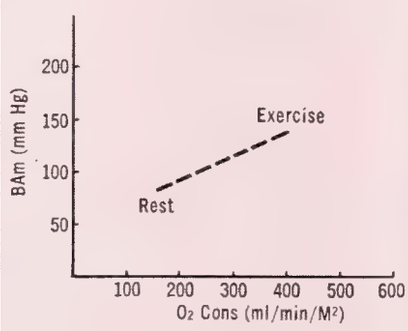
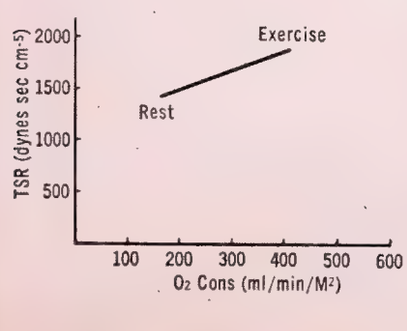
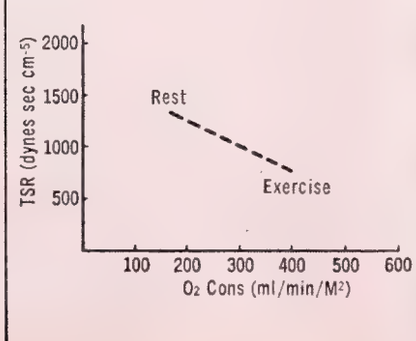
WASHINGTON: NHI COSTS. The Department of Health, Education and Welfare has prepared cost estimates of various national health insurance proposals for Congress. The figures ranges from $107.4 billion for the Long-Ribicoff bill to $109.5 billion for the Nixon bill, and $112.3 billion for the Mills-Kennedy bill to $116 billion for labor's health security measure.

WASHINGTON: REPORT VIEWS FUNCTIONS OF PART B CARRIERS. DHEW Secretary Caspar Weinberger has released a report from the DHEW Advisory Committee on Medicare Administration. The report recommends no change in the reliance of Medicare Part B on nonprofit and commercial insurance carriers. The report states the creation and operation of professional standards review organizations will not reduce significantly the functions of Part B carriers in the immediate future. The committee concluded, however, that a reliable method for measuring career performance is needed along with a workable system of terminating contracts of poor performers. Other recommendations include incentive mechanisms for good carrier performance, enlargement of the consultative role of carriers, and reduction of the role of Social Security in carrier decision making. The group also suggested that the government take additional steps to insure more competition in data processing for the Part B program.

WASHINGTON: PENDING TAX PROPOSALS. The House Committee on Ways and Means is considering pending tax legislation which includes a provision to seek the first $200 of expenses for professional memberships as nondeductible expenses. The committee is also considering a proposal to bar deductions of the cost of business trips outside the United States.

WASHINGTON: HEALTH MANPOWER ACT CLEARS COMMITTEE. The Health Profession's Educational Assistance Act of 1974 has cleared the Senate Labor and Public Welfare Committee. TMA and the American Medical Association have expressed opposition to the major provisions in the bill. These include 1) mandatory two-year service requirement for all medical students; 2) federal control of residency training programs; and 3) federal licensure and relicensure requirements. The manpower legislation has not yet cleared the Commerce Committee in the House.

HEMODYNAMICS OF ANGINA PECTORIS* — PATIENTS RESTING AND EXERCISING, BEFORE AND AFTER ISORDIL SUBLINGUAL
(isosorbide dinitrate)

BEFORE MEDICATION		AFTER 5 mg. ISORDIL SUBLINGUAL (isosorbide dinitrate)
	PULMONARY ARTERY (MEAN PRESSURE)	
	TOTAL PULMONARY RESISTANCE	
	CARDIAC INDEX	
	BRACHIAL ARTERY (MEAN PRESSURE)	
	TOTAL SYSTEMIC RESISTANCE	

IN ANGINA PECTORIS*

- to abort or terminate acute anginal attacks
- to reduce the frequency and severity of anginal episodes often caused by unavoidable everyday stress

ISORDIL® SUBLINGUAL
(ISOSORBIDE DINITRATE)

SUBLINGUAL TABLETS: 2.5 mg. and 5 mg.

***Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:
"Probably" effective: When taken by the sublingual route, Isordil Sublingual is indicated for the treatment of acute anginal attacks and for prophylaxis in situations likely to provoke such attacks.
Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.

Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

May we send you reprints, detailed information and/or professional samples?

IVES LABORATORIES INC. Ives®
New York, N.Y. 10017

DEDICATED TO IMPROVING THE QUALITY OF LIFE, THROUGH MEDICINE

Adapted from: Kasparian H, Najmi M, Likoff W: Laboratory Evaluation of Coronary Artery Disease. Scientific Exhibit, AMA Convention, Chicago, Ill, June 1966.

NEED A TAX BREAK? ...INFLATION HEDGE?

Tax-free dollars can be used to purchase real estate as funding for self-employed individuals' retirement plans under the Keogh legislation. This inflation hedge is available for converting existing plans as well as setting up new ones.

Keogh plans are described by tax experts as "the most important tax break ever given to self-employed individuals . . . " **And the annual deduction from gross income has now been raised to $7,500.**

Heritage consultants will explain how this unique opportunity can help you in these troubled economic times. Heritage Company has set up plans in the last year with assets valued at well over a million dollars. We offer help in plans funded by any approved method, including our exclusive funding with leveraged real estate.

Ask your own tax expert and attorney. This opportunity deserves careful investigation. There's no obligation, of course.

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Yes, I'd like to know more about your real estate funding plan.

Name _____

Address _____

City _____ State _____ Zip _____

Telephone number _____

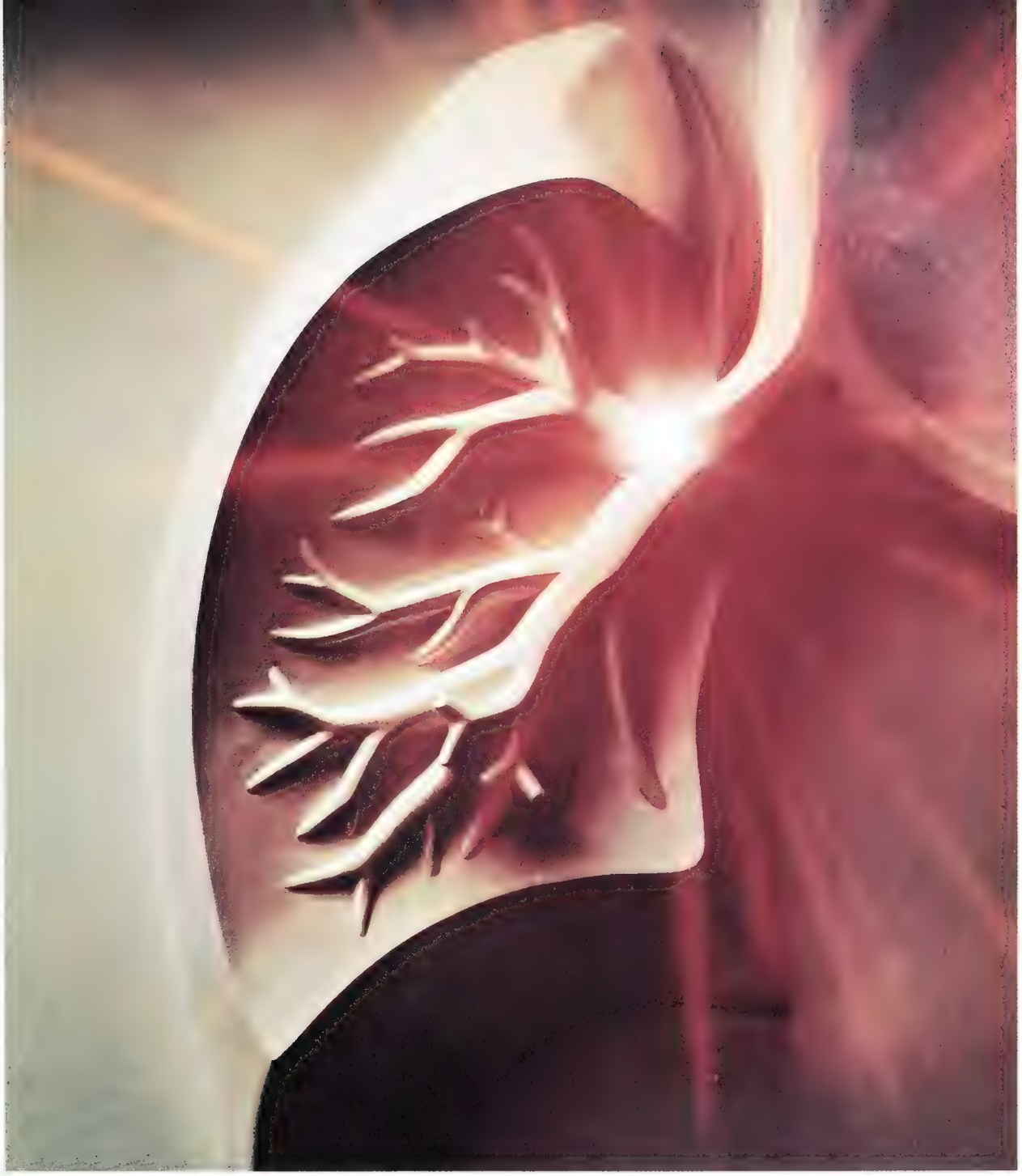
Rondomycin®
(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.
WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**
Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)
Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.
Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)
All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.
Tetracyclines are present in milk of lactating women taking tetracyclines.
To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.
Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).
Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.
Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.
USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.
For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.
Eaton Agent pneumonia. 900 mg daily for six days.
Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.
Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.
Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.
In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.
In streptococcal infections, a therapeutic dose should be given for at least 10 days.
SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73

WALLACE LABORATORIES
CRANBURY, NEW JERSEY 08512



When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

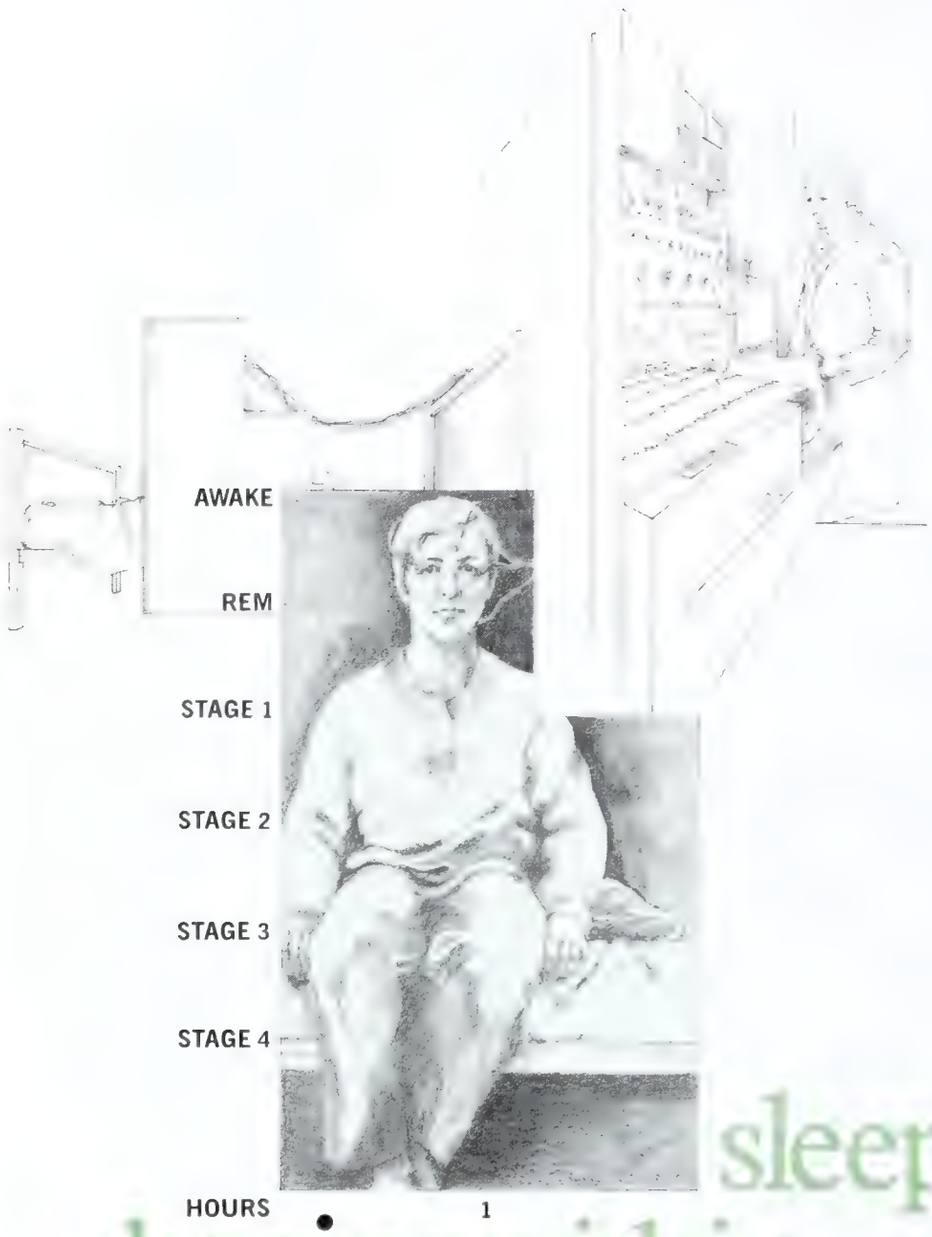
Rondomycin® 300 mg. Capsules

[methacycline HCl]

Delivers from the very first dose:

Studies show that after the first dose serum levels rapidly rise above minimum *in vitro* inhibitory concentrations

*Since many strains are known to be resistant, routine sensitivity testing is recommended.



sleep begins within 17 minutes, on average ... an initial benefit of

Dalmane®
(flurazepam HCl) proved by a 22-night clinical study of insomnia patients in the sleep research laboratory and at home[1]

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]

Average Time Required to Fall Asleep (4 Studies, 16 Subjects[2-5])

confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

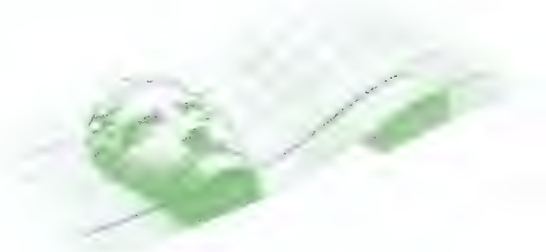
Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage[2-5]

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.
Contraindications: Known hypersensitivity to flurazepam HCl.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.
Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.
Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.
Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



when restful sleep is indicated

Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.* — usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage

REFERENCES: 1. Kales A, *et al*: *Arch Gen Psychiatry 23*:226-232, Sep 1970
2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
3. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (> 5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, descreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles and Single Unit Packages of 100 capsules.

SK&F CO.
Carolina, P.R. 00630
Subsidiary of
SmithKline Corporation

KEEP THE HYPERTENSIVE PATIENT ON THERAPY

KEEP THERAPY SIMPLE WITH DYAZIDE®

Trademark

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

No potassium supplements
No special K^+ rich diets
Just 'Dyazide' once daily or twice daily

Studies have demonstrated that two prime reasons patients drop out of hypertensive therapy are: (1) the patient failed to understand directions, and (2) the regimen was overly complicated.* Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

*E.D. Freis: The Modern Management of Hypertension, V.A. Information Bulletin, 11-35.

TO KEEP BLOOD PRESSURE DOWN AND KEEP POTASSIUM LEVELS UP

The Rx that says "Relax"

BUTISOL Sodium provides highly predictable sedative effect: minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action: begins to work within 30 minutes...yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

BUTISOL Sodium is remarkably well tolerated: a 30-year safety record assures you that there is little likelihood of unexpected reactions.

BUTISOL Sodium saves your patients money: costs less than half as much as most commonly prescribed sedative tranquilizers.*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

*Based on surveys of average daily prescription costs.

Butisol (R) SODIUM™
(SODIUM BUTABARBITAL)

Contraindications: Sensitivity or idiosyncracy to barbiturates; history of manifest or latent porphyria or marked liver impairment; respiratory disease with dyspnea or obstruction; history of addiction to sedative/hypnotic drugs; uncontrolled pain, to avoid because of possible excitement.
Precautions: Exercise caution in: moderate to severe hepatic disease; anticoagulant therapy, because of possible increased metabolism of coumarin anticoagulants; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects.
Adverse Reactions: Slight hangover, drowsiness, lethargy, headache, skin eruptions, nausea and vomiting, hypersensitivity reactions (especially in those with asthma, urticaria, angioneurotic edema, or similar conditions).
Usual Adult Dosage: For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg.
Available as: Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

McNEIL
McNeil Laboratories, Inc., Fort Washington, Pa. 19034

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COMING MEETINGS

PANHANDLE DISTRICT MEDICAL SOCIETY

The 72nd Annual Meeting of the Panhandle District Medical Society will be held Oct 12 at the Hilton Inn, Amarillo. Theme for the program is "a giant parade of activities" and includes a financial investment seminar, physician's hobby show, social hour, and dinner dance in addition to the scientific program. Guest speakers are Dr. C K Osterland, director, Thorp Labs, Division of Immunochemistry and Allergy, Royal Victoria Hospital, Montreal; Dr. J Donald Smiley, associate professor of medicine, UT Southwestern Medical School, Dallas; Dr. Felix N Rutledge, professor and gynecologist-in-chief, M D Anderson Hospital, Houston; Dr. Jack M Schneider, professor and chairman, department of ob-gyn, Texas Tech University School of Medicine, Lubbock; Dr. Stanley J Dudrick, dept of surgery, UT Medical School, Houston; and Dr. C Dale Coln, UT Southwestern Medical School at Dallas.

Contact: Ms. Carlie Umphres, Panhandle District Medical Society, PO Box 3276, Amarillo 79106, Exec Sec.

SECOND INTERNATIONAL FILM FESTIVAL ON CULTURE AND PSYCHIATRY

The University of Texas Health Science Center at San Antonio will present a program on Mexican Culture and the Healing Arts as its second International Film Festival on Culture and Psychiatry Sept 30-Oct 5 at The University of Texas Health Science Center at San Antonio. The program is co-sponsored by UTHSC and the University of Mexico. Evening programs of films, television, live entertainment and discussion will be held Sept 30-Oct 2 at the Ruth Taylor Concert Hall, Trinity University, with a fee of $1.00 per person per evening. The scientific program on folk medicine will be held Oct 3 at UTHSC and is accredited for 7 prescribed hours AAFP and Category I, AMA Physician's Recognition Award. Registration fee is $15. The programs for Oct 4-5 will include films, lectures, and discussions on culture, rituals, primitive and modern healing rites, and "The Chicano." Registration fee for the two-day program is $30.00.

For more information and registration forms, contact: The Dept of Psychiatry, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284.

CURRENT MEETINGS IN TEXAS

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY has scheduled its annual scientific meeting Oct 6-10 at the Convention Center in Dallas. The major speaker will be Dr. Charles C Edwards, assistant secretary of health for the Department of Health, Education and Welfare. There will be a total of 519 instructional courses conducted throughout the meeting. Topics for scientific sessions in ophthalmology include reconstructive plastic surgery, the problem of blindness in the world, automatic refraction, and modern advances in the treatment of strabismus. Topics for the otolaryngology sessions focus on the socioeconomic aspects of medicine including professional standards review organizations and malpractice. The session will also feature 59 scientific exhibits. A special exhibits visitation day is set for Oct 8 for nonmembers, physicians not registered for the scientific meeting, and others affiliated with health organizations. Contact: Dr. C M Kos, American Academy of Ophthalmology and Otolaryngology, 15 Second St, SW, Rochester, Minn 55901, Exec Sec-Treas.

TEXAS GOVERNOR'S CONFERENCE ON ARTHRITIS will be presented Oct 31-Nov 1, 1974, at the Sheraton-Crest Inn, Austin. Speakers featured on the program are: State Rep Carlos Truan, chairman of House Committee on Human Relations; State Sen Bob Gammage, chairman of Public Health and Welfare Sub-committee; Mr. Joe Christie, Texas State Insurance Commissioner; US Congressman Bob Eckhardt; Mr. Dan Button, president, National Arthritis Foundation; Mr. Ray Miller, executive news director, KPRC, Houston; US Congressman Charles Wilson; Dr Ed W Schmidt, president, Texas Medical Association; Mr. David K Ferguson, director, Texas Regional Medical Programs; Dr. James Peavy, commissioner of health, Texas State Department of Health; Mr. Ted Norris, president, SAMA; and Dr. Morris Ziff, chief, rheumatic diseases unit, The University of Texas Health Science Center at Dallas. Registration fee: $5.00 Contact: Dr. Homer Goehrs, Austin Diagnostic Clinic, 801 W 34th St, Austin 78701.

For other courses and symposiums, see Continuing Education Courses, pp 41-42.

BAYLOR LAW REVIEW will present a symposium on "Death with Dignity" Nov 8, at Kayser Auditorium, Baylor University, Waco. The symposium will offer physicians, attorneys, and members of the general public the opportunity to hear and participate in discussions on modern life sustaining techniques; death: when does it occur; physician's legal liability, civil and criminal; dealing with death—the patient and the family; and the physician's dilemma. These discussions will be led by men who have achieved state-wide and national recognition in their respective professions. For more information, contact Baylor Law Review, PO Box 6262, Waco 76706.

UNIVERSITY OF TEXAS SCHOOL OF ARCHITECTURE graduate program in community and regional planning is sponsoring an interdisciplinary conference entitled "Designing a Humane Environment, The Human Response to Physical Space" Nov 1 at the Joe C Thompson Conference Center in Austin. The conference, limited to 50 participants, will focus on community planning and the physical setting of health care institutions in relation to the mental well-being of patients. Basic questions to be discussed include: How does physical space influence our behavior? Has our built environment made us sick? Should we examine the room before we examine the patient? Conference leader is Dr. Aristides Esser, psychiatrist and architect. He is associated with the Rockland County State Hospital, New York, and is president of ASMER, American Synergistics Man and Environment Relations. The fee for the meeting is $40. Contact: Reynell Parkins, PhD, The University of Texas School of Architecture, Austin 78712.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF FAMILY PHYSICIANS has scheduled its 26th Annual Convention Oct 14-17, 1974, at the Los Angeles Convention Center, Los Angeles, Calif. Topics to be covered in the program include newer treatment of fungal infections; record review—research and reality; hypertension; pragmatic ophthalmology for the busy family physician; management of trauma; management of chronic pain; office efficiency; the minimal brain damaged child; the high risk OB patient, counseling the troubled married couple; health quackery—fads, foibles and facts; rheumatoid arthritis and the role of early synovectomy; and acupuncture pros and cons. Registration fee is $15 for AAFP members and $25 for non-member physicians. Contact: American Academy of Family Physicians, 1740 W 92nd St, Kansas City, Mo 64114.

AMERICAN ACADEMY OF PEDIATRICS' 43rd Annual Meeting will convene Oct 19, 1974, for four days in San Francisco. Meeting sessions will be held in the San Francisco Hilton Hotel, the Civic Auditorium, and St Francis Hotel. It will open with one and two-day seminars Oct 19-20. General sessions, open section meetings and round table discussions are included in the meeting program. Other meeting highlights include a special program on childhood trauma featuring as keynote speaker, consumer advocate, Ralph Nader; as well as special programs on peer review in office practice, medical liability, and a special open forum on national health insurance. Contact: American Academy of Pediatrics, PO Box 1034, Div M, Evanston, Ill 60204.

AMERICAN COLLEGE OF PHYSICIANS will sponsor a three-day postgraduate course entitled "Innovations in the Diagnosis and Management of Acute Myocardial Infarction" Oct 30-Nov 1, 1974, at Jefferson Medical College, Philadelphia, Pa. Purpose of the course is to give specialists in internal medicine and related fields an opportunity to review basic information and to find out what is new in a particular area of interest. Computer analysis, coronary bypass surgery, intermediate cardiac care, drug treatment, and active rehabilitation of the patient will be discussed. Contact: Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine St, Philadelphia 19104.

AMERICAN COLLEGE OF PHYSICIANS will sponsor a three-day postgraduate course entitled "Valvular Heart Disease—1974" on Oct 24-26, 1974, at the University of New Mexico School of Medicine, Albuquerque. The course is designed to bring information regarding the pathology, clinical recognition and surgical treatment of valvular heart disease to the practicing internist. By the use of an auditorium equipped with individual stethophone and palpator units, each enrollee will be able to participate in the examination of patients with specific types of valvular heart disease. Emphasis will be placed on the fine points of clinical recognition of this disease and assessment of its severity. Contact: Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine St, Philadelphia 19104.

AMERICAN COLLEGE OF PHYSICIANS will present a postgraduate course on rheumatic diseases Oct 21-25, 1974, in Boston. The course, held in conjunction with Harvard Medical School and Robert B Brigham Hospital will take place at the Children's Hospital Medical Center. The program will review current concepts of pathology, immunopathology and pathophysiology of the common rheumatic diseases, and introduce newer methods of diagnosis and areas of research in musculoskeletal diseases. It will emphasize practical management of the disease, including reconstructive surgery, physical therapy, and occupational therapy. Contact: Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine St, Philadelphia 19104.

AMERICAN COLLEGE OF SURGEONS plans its 60th Annual Clinical Congress in Miami Beach Oct 21-25, 1974. The program will include 17 postgraduate courses, more than 260 research-in-progress reports called the Forum on Fundamental Surgical Problems, more than 50 panel discussions and symposia on general surgery and the surgical specialties, live telecasts of operations, a wrap-up of "What's New in Surgery," and more than 350 scientific and industrial exhibits. Contact: Dr. C Rollins Hanlon, American College of Surgeons, 55 E Erie St, Chicago 60611, Dir.

AMERICAN MEDICAL ASSOCIATION'S Council on Health Manpower will sponsor its Second National Congress on Health Manpower Oct 31-Nov 2, 1974, at the Palmer House, Chicago. Purpose of the Congress is to assess the adequacy of health manpower supply nationally, in terms of gross numerical projections; to assess the distribution of physicians between medical specialties, and recommend methods and incentives to achieve needed apportionment of physicians in such specialties; to assess the impact of foreign medical graduates on the adequacy, availability and distribution of health services and to make recommendations as to any changes which may be indicated in national policy; and to describe methodology and make recommendations as to ways in which communities or planning areas can quantify their particular health manpower shortages and act to ameliorate such shortages. Registration fee: $55. Contact: Dept of Health Manpower, American Medical Association, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WRITERS ASSOCIATION is conducting its 1974 annual meeting Oct 2-5, 1974, at the Beverly Hilton Hotel, Los Angeles. With the theme of "Medical Communication: The Here and Now," the meeting will offer bio-medical writers and editors general sessions with practical pointers on medical communication by Dr. William B Bean, Dr. Edward J Huth, and Ms. Sylvia Covet; specialty sessions for journal and free-lance editors, for pharmaceutical writers and for audiovisual communicators; 22 workshops and seminars on a variety of clinical subjects; and the "First Annual AMWA Film Festival," with outstanding medical films in six categories being judged and evaluated by leading film producers. Contact: Lillian Sablack, AMWA, 9650 Rockville Pike, Bethesda, Md 20014, Exec Sec.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES will emphasize the theme, "Federal Medicine—Finding Better Ways to Serve" during its 81st Annual Meeting at the Town & Country Hotel, San Diego, Calif, Oct 28-31, 1974. Contact: Lt. Commander Thomas E Thomas, MSC USN, Military Personnel Dept, Naval Regional Medical Center, San Diego, Calif 92134.

LEUKEMIA SOCIETY OF AMERICA and University of California, San Francisco School of Medicine will co-sponsor a symposium entitled "Cause and Treatment of Leukemia" Oct 25, 1974, at Cole Hall, University of California, San Francisco. Topics for the program are: developing concepts of the cause of human leukemia and immune response; viral causation of leukemia; treatment of childhood leukemia; combination chemotherapy and immunotherapy in treatment of granulocytic leukemia; and review and present concepts in use of bone marrow transplantation in treatment of human leukemia. Registration fee: $25. Contact: Extended Programs in Medical Education, Room 575U, University of California, San Francisco 94143.

Calendar of Listings

■ Denotes Texas Meetings

OCTOBER

AMERICAN CANCER SOCIETY, New York City, Oct 14-18, 1974. Lane W Adams, 219 E 42nd St, New York 10017, Exec VPres.

AMERICAN COLLEGE OF GASTROENTEROLOGY, Bal Harbour, Fla, Oct 21-26, 1974. Mr. Daniel Weiss, 299 Broadway, New York 10007, Exec Dir.

AMERICAN DIETETIC ASSOCIATION, Philadelphia, Oct 7-11, 1974. Robert M Crum, JD, American Dietetic Association, 620 N Michigan Ave, Chicago 60611, Exec Dir.

AMERICAN FRACTURE ASSOCIATION, Atlanta, Oct 20-23, 1974. Dr. H W Wellmerling, 600 Livingston Bldg, Bloomington, Ill 61701, General Sec.

AMERICAN MEDICAL RECORD ASSOCIATION, San Francisco, Oct 13-17, 1974. Mrs. Mary Waterstraat, 815 N Michigan Ave, Suite 1850, Chicago 60611, Exec Sec.

AMERICAN PUBLIC HEALTH ASSOCIATION, New Orleans, Oct 20-24, 1974. American Public Health Association, 1015 18th St, NW, Washington, DC 20036.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, Washington, DC, Oct 12-16, 1974. John W Andes, 515 Busse Hwy, Park Ridge, Ill 60068, Exec Sec.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Washington, DC, Oct 4-11, 1974. Dr. George F Stevenson, 2100 W Harrison, Chicago 60612.

■ AMERICAN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGEONS, Houston, Oct 27-Nov 1, 1974. Dallas Whaley, 29 E Madison, Chicago, Ill 60602, Exec VPres.

INTERNATIONAL CANCER CONGRESS, Florence, Italy, Oct 20-26, 1974. Dr. Murray M Copeland, M D Anderson Hospital and Tumor Institute, Houston 77025.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct 12, 1974. Carlie Umphres, PO Box 3276, Amarillo 79106, Exec Sec.

THIRD WORLD CONGRESS, COLLEGIUM INTERNATIONALE CHIRURGIAE DIGESTIVAE, Chicago, Oct 10-14, 1974. Secretariat, University of Illinois Department of Surgery, PO Box 6998, Chicago 60680.

NOVEMBER

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, San Francisco, Nov 16-19, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN ASSOCIATION OF BLOOD BANKS, Anaheim, Nov 9-14, 1974. Ms. Lois James, 1828 L St NW, Washington, DC 20036, Exec Sec.

■ AMERICAN ASSOCIATION FOR RESPIRATORY THERAPY, Dallas, Nov 22-27, 1974. Winfield Singletary, 7411 Hines Pl, Dallas 75235, Exec Off.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, Washington, DC, Nov 4-6, 1974. Arthur E Auer, 241 E Saginaw, East Lansing, Mich 48823, Exec Dir.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, San Francisco, Nov 20-22, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN DENTAL ASSOCIATION, Washington, DC, Nov 10-14, 1974. C Gordon Watson, 211 E Chicago Ave, Chicago 60611, Exec Dir.

■ AMERICAN HEART ASSOCIATION, Dallas, Nov 18-23, 1974. William W Moore, 44 E 23rd St, New York 10010, Exec Off.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, New Orleans, Nov 5-10, 1974. F D Nowlin, 800 Washington Ave SE, Minneapolis 55414, Exec Sec.

AMERICAN SOCIETY OF CYTOLOGY, New York, Nov 6-9, 1974. Dr. Warren R Lang, Health Sciences Center, 130 S 9th St, Suite 1006, Philadelphia 19105, Sec-treas.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, Chicago, Nov 10-14, 1974. Dr. John A D Cooper, One Dupont Circle, NW, Washington, DC 20036, Pres.

INTERNATIONAL COLLEGE OF SURGEONS, Portland, Ore., Nov, 1974. Dr. Virgil T DeVault, 1516 Lake Shore Dr, Chicago 60601, Exec Off.

MEDICAL SOCIETY OF THE US AND MEXICO, Guadalajara, Mex, Nov 6-10, 1974. Mrs. Virginia E Bryant, 333 W Thomas, No 207, Phoenix, Ariz 85013, Exec Sec.

SOUTHERN MEDICAL ASSOCIATION, Atlanta, Nov 17-20, 1974. Robert F Butts, 2601 Highland Ave, Birmingham 35210, Exec Dir.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, Galveston, Nov 9-13, 1974. Donald C Jackson, 1905 N Lamar Blvd, Austin 78705, Exec Dir.

■ TEXAS MEDICAL ASSOCIATION, House of Delegates, Austin, Nov 2-3, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Dir.

■ TEXAS NURSING HOME ASSOCIATION, Houston, Nov 20-22, 1974. Sidney D Rich, 6225 Highway 290E, Austin 78723, Exec VPres.

■ TEXAS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Houston, Nov 1-2, 1974. Dr. Bert A DeBord, Scott and White Clinic, Temple 76501, Sec.

WEST COAST ACUPUNCTURE RESEARCH INSTITUTE, Beverly Hills, Nov 16-18, 1974. Dr. Herman V Platt, 8907 Wilshire Blvd, Beverly Hills, Calif 90211, Med Dir.

DECEMBER

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec 4-7, 1974. Mrs. Betty Suor, 1116 S 5th, Tacoma, Wash 98405, Exec Sec.

AMERICAN ACADEMY OF PSYCHOANALYSIS, Kingston, Jamaica, Dec 5-8, 1974. Dr. Joseph Barnett, 8 E 77th St, New York 11029.

■ AMERICAN COLLEGE OF PHYSICIANS, Galveston, Dec 6-7, 1974. Dr. Robert A Hettig, Baylor University College of Medicine, 1200 M D Anderson Blvd, Houston 77025.

AMERICAN MEDICAL ASSOCIATION, Portland, Ore, Dec 1-4, 1974. Dr. Ernest B Howard, 535 N Dearborn St, Chicago 60610, Exec VPres.

■ **AMERICAN MEDICAL WOMEN'S ASSOCIATION, Houston, Dec 1-3, 1974. Dr. Claudine Moss Gay, 403 E Capitol St, Washington, DC 20003, VPres.**

AMERICAN SOCIETY OF HEMATOLOGY, Atlanta, Dec 7-10, 1974. Charles B Slack, 6900 Grove Road, Thorofare, NJ 08086.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Dec 1-6, 1974. Miss Adele Swenson, 713 E Genesee St, Syracuse, NY 13210, Exec Dir.

SOUTHERN SURGICAL ASSOCIATION, Boca Raton, Fla, Dec 9-11, 1974. Dr. W Dean Warren, Emory University, Atlanta 30322, Sec.

■ SOUTHWESTERN GYNECOLOGIC ASSEMBLY, Dallas, Dec 5-7, 1974. Dr. Marvin Gerard, 670 W Arapaho, Suite 2, Richardson 75080, Chrmn.

■ **TEXAS ACADEMY OF INTERNAL MEDICINE, Galveston, Dec 5, 1974. Dr. Tom W Duke, PO Box 3460, Amarillo 79106, Sec.**

■ **TEXAS SOCIETY OF INTERNAL MEDICINE, Galveston, Dec, 1974. Dr. Willis A Seyffert, Jr, 6006 N Mesa, #100, El Paso 79912, Sec-treas.**

JANUARY

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, New York City, Jan 26-31, 1975. William Bevan, 1515 Massachusetts Ave, Washington, DC 20005, Exec Off.

■ AMERICAN COLLEGE OF SURGEONS, SOUTH TEXAS CHAPTER, Galveston, Jan 30-Feb 1, 1975. Dr. Peter B Fisher, 615 Medical Twrs, Houston, 77025.

■ **TEXAS MEDICAL ASSOCIATION, Austin, Jan 17-19, 1975. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Dir.**

■ **TEXAS SOCIETY OF PATHOLOGISTS, El Paso, Jan 24-26, 1975. Dr. John A Webb, 704 Medical Towers, Houston 77025, Sec.**

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, San Diego, Feb 15-19, 1975. James O Kelley, 225 E Michigan St, Milwaukee 53202, Exec Off.

AMERICAN ACADEMY OF FORENSIC SCIENCES, Chicago, David A Crown, Room 3517, State Dept, Washington, DC 20520, Pres.

■ AMERICAN COLLEGE OF CARDIOLOGY, Houston, Feb 10-13, 1975. William D Nelligan, 9650 Rockville Pike, Bethesda 20014, Exec Off.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, Orlando, Fla, Feb 28-Mar 5, 1975. Dr. B F Alfano, 675 Main St, Melrose, Mass 02176, Sec.

■ INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS, San Antonio, Feb 27-28, 1975. S E Cockrell, Jr, 202 W French Pl, San Antonio 78212, Exec Off.

PAN-PACIFIC SURGICAL ASSOCIATION, Honolulu, Feb 15-21, 1975. Dr. John R Watson, 236 Alexander Young Bldg, Honolulu 96817, Chrmn of the Bd.

MARCH

AMERICAN ASSOCIATION OF ANATOMISTS, Los Angeles, Mar 23-27, 1975. Dr. John E Pauly, Dept of Anatomy, University of Arkansas Medical Center, Little Rock, Ark 72201, Sec-Treas.

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS, New Orleans, Mar 1, 1975. Robert E Learmouth, 9650 Rockville Pike, Bethesda, Md 20014, Adm Off.

AMERICAN COLLEGE OF RADIOLOGY, Portland, Ore, Mar 31-Apr 4, 1975. Sheila A McGing, 20 N Wacker Dr, Room 2920, Chicago 60606, Mtg Mgr.

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, Washington, DC, Mar 20-21, 1975. Mrs. Elaine Galasso, 1718 Gallagher Rd, Norristown, Pa 19401, Exec Sec.

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Miami Beach, Mar 2-7, 1975. Dr. John G Bellows, 30 N Michigan Ave, Chicago 60602.

■ DALLAS SOUTHERN CLINICAL SOCIETY, Dallas, Mar 17-19, 1975. Robert L Heath, 433 Medical Arts Bldg, Dallas 75201, Exec Dir.

■ NINTH DISTRICT MEDICAL SOCIETY, Livingston, Mar 20, 1975. Mrs. R C Torrence, 103 Jessie H Jones Library Bldg, Houston 77025.

■ SOCIETY OF NUCLEAR MEDICINE, SW CHAPTER, Galveston, Mar 21-23, 1975. Dr. Thomas P Haynie, 6723 Bertner Ave, Houston 77025, Sec-Treas.

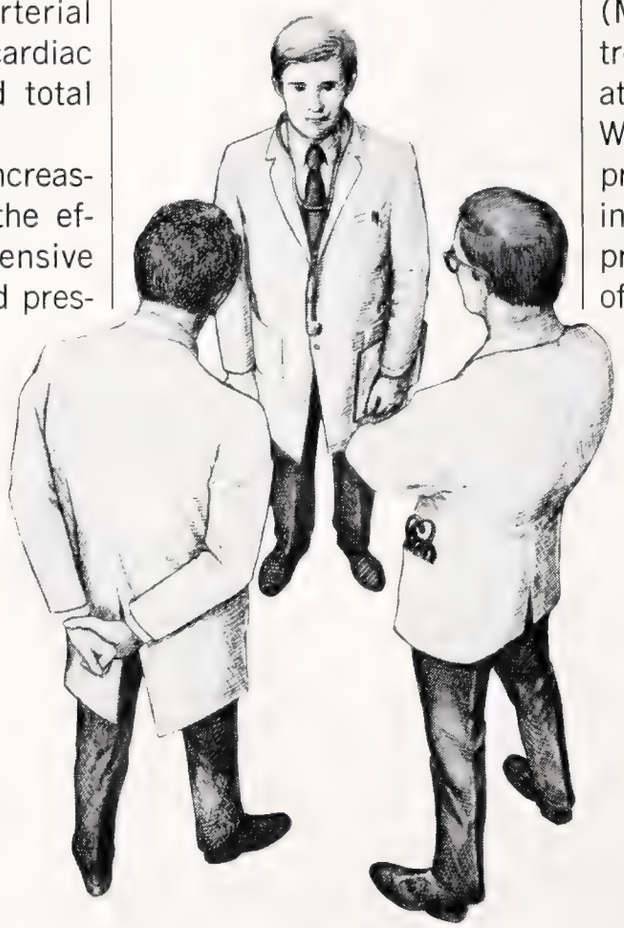
■ TEXAS RADIOLOGICAL SOCIETY, Abilene, Mar 13-15, 1975. Dr. Francis Edw O'Neill, 1128 Nix Professional Bldg, San Antonio 78205, Sec-Treas.

"Let me explain the 'Truth in Lending' laws to you."

The more physicians consider the hemodynamics of lowering blood pressure...

Most physicians now agree on the importance of reducing blood pressure in the hypertensive patient. But high blood pressure exists, of course, only as part of a complete clinical picture. The hemodynamic profile of well-established essential hypertension is characterized by elevated arterial blood pressure, normal cardiac output, and increased total peripheral resistance.

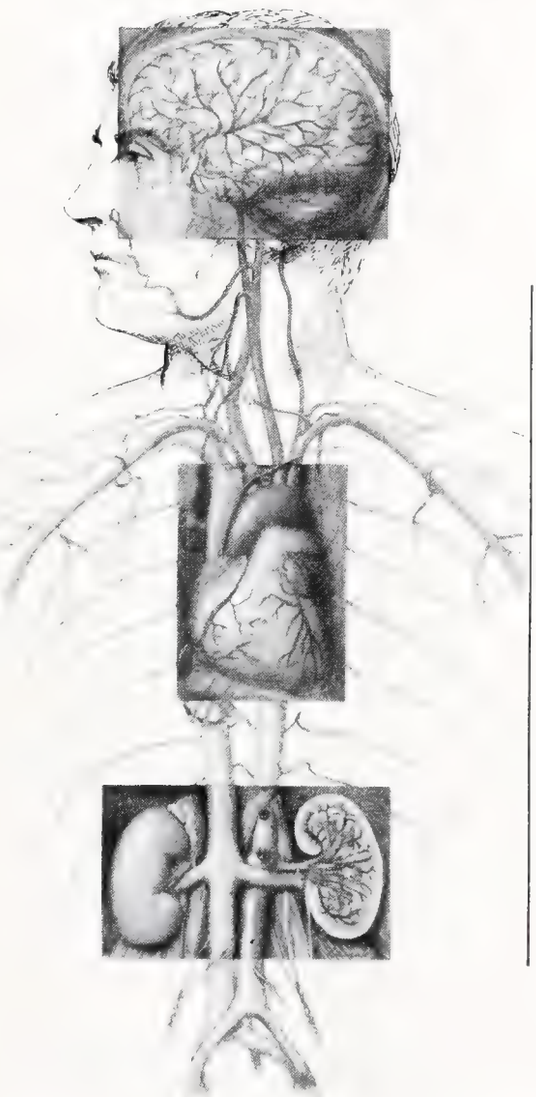
And so, physicians are increasingly concerned with the effects of an antihypertensive agent not only on blood pressure itself but also on the hemodynamic pattern—in short, with the total effect of the drug. *Does* it indeed help lower blood pressure effectively? *Is* peripheral resistance reduced? *Are* cardiac output and renal functions maintained? And, also, is there likely to be drug-induced postural hypotension serious enough to pose a threat to the patient's cerebrovascular status?



With this emphasis on overall drug performance has come a growing reliance on ALDOMET® (Methyldopa, MSD) in the treatment of sustained moderate hypertension.

With its unique hemodynamic profile, ALDOMET has drawn increasing attention and approval from physicians. First, of course, for its efficacy in

the more physicians rely on this unique antihypertensive



lowering blood pressure. But there are other considerations as well. Cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is actually slowed. Peripheral resistance is apparently reduced. ALDOMET does not usually compromise existing renal function; it generally does not reduce renal blood flow, glomerular filtration rate, or filtration fraction. And ALDOMET usually does not cause symptomatic postural or exercise hypotension.

Contraindications include active hepatic disease and known sensitivity to the drug. Use with caution in patients with a history of liver disease or dysfunction. Not recommended in pheochromocytoma or pregnancy.

It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

In most cases of sustained moderate hypertension

TABLETS, 250 mg and 500 mg

ALDOMET®

(METHYLDOPA | MSD)

smoothly lowers blood pressure

NEW now available in 500 mg TABLETS as well as the standard 250-mg tablets

For a brief summary of prescribing information, please see following page.

In most cases of sustained moderate hypertension

ALDOMET® (METHYLDOPA MSD)

smoothly lowers blood pressure

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis. Known sensitivity. Not recommended in pheochromocytoma. Unsuitable in mild or labile hypertension responsive to mild sedation or thiazide therapy. Use cautiously in patients with history of previous liver disease or dysfunction.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between six and twelve months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at six and twelve months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first three weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first two to three months of therapy. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first six to twelve weeks of therapy or whenever an unexplained fever occurs. If fever, abnormalities in liver function tests, or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, reversible reduction in leukocyte count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur.

Use in Pregnancy and Childbearing Age—Not recommended in pregnancy. In women of childbearing age, weigh potential benefits against possible fetal hazards.

Precautions: Methyldopa may interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, spuriously high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has occurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: Sedation, usually transient, may be seen during initial therapy or when dosage is increased. Headache, asthenia, or weakness may be noted as early, transient symptoms. Symptoms associated with effective lowering of blood pressure are occasionally seen and include dizziness, lightheadedness, and symptoms of cerebrovascular insufficiency. Angina pectoris may be aggravated. Symptoms of orthostatic hypotension may occur; if symptoms occur, reduction of dosage is suggested. Bradycardia, nasal stuffiness, mild dryness of mouth, and gastrointestinal symptoms including distention, constipation, flatus, and diarrhea occur occasionally; these generally can be relieved by reducing dosage. Nausea and vomiting have been reported in only a few patients. Sore tongue or "black tongue," pancreatitis, and inflammation of salivary glands may occur.

Weight gain and edema occur infrequently and are relieved by administering a thiazide diuretic; if edema progresses or signs of pulmonary congestion appear, discontinue drug. A rise in BUN has been observed. Other rare reactions include breast enlargement, lactation, impotence, decreased libido, skin rash, mild arthralgia, myalgia, paresthesias, Bell's palsy, parkinsonism, psychic disturbances including nightmares, reversible mild psychoses or depression. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Note: Dosage should be limited initially to 500 mg daily when following previous antihypertensive agents other than thiazides. Maximal recommended daily dose is 3.0 g. Patients with impaired renal function may respond to smaller doses than patients with normal kidney function. Syncope in older patients has been related to increased sensitivity in those with advanced arteriosclerotic vascular disease; this may be avoided by lower doses. Tolerance occasionally seen either early or late, but more likely between second and third month after initiation of therapy; increased dosage or combined therapy with a thiazide frequently restores effective control.

How Supplied: Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

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CONTINUING EDUCATION COURSES

OCTOBER

General Medicine
Title: October Seminars—A Unique Postgraduate Opportunity
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Oct 9-30, 1974 (Wednesday afternoons)
Fee: $100
Credit: 10 prescribed hours AAFP; Category 1, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Infectious Diseases
Title: From the Trench to the Bench—Clinical and Laboratory Aspects of Anaerobic Infections
Sponsor: UT Health Science Center at Houston; Baylor College of Medicine; UT System Cancer Center, MD Anderson Hospital and Tumor Institute; Houston Association of Medical Microbiologists
Location: Houston
Date: Oct 17, 1974
Fee: $6
Contact: Office of the Director, UT Health Science Center at Houston, Division of Continuing Education, Box 20367, Houston 77025

Internal Medicine
Title: Grady Reddick Lecture in Internal Medicine, "Super Infections and Immunological Failures"
Sponsors: Dallas Academy of Internal Medicine; Dallas County Medical Society
Location: Beasley Auditorium, BUMC, Dallas
Date: Oct 8, 1974
Guest Speakers: Dr. Gene H Stollermann, University of Tennessee Medical School
Contact: Mrs. Laurine Abernathy, Area Code 214, 747-8951

Title: Medical Intensive Care Course #2
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Oct 10-Dec 13, 1974 (Each Thursday)
Fee: $150
Credit: 90 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Clinical Hemostasis
Sponsors: A Webb Roberts Center, Dallas
Location: Dallas
Date: October 12, 1974
Fee: $35
Guest Speakers: Dr. A Morengo-Rowe; Dr. J E Ledeson
Contact: Dr. George J Race, Dean, A Webb Roberts Center, 3500 Gaston Ave, Dallas 75246

Title: International Symposium on the Chemistry and Metabolism of Gastrointestinal Hormones
Sponsors: UT Medical Branch at Galveston
Location: UT Medical Branch at Galveston
Date: Oct 9-11, 1974
Contact: Dr. James C Thompson, Dept of Surgery, UT Medical Branch, Galveston 77550

Title: Dinnard Carroll Memorial Oncology Lecture, "Lymphomas"
Sponsors: A Webb Roberts Center, Dallas
Location: Beasley Auditorium, BUMC, Dallas
Date: Oct 25, 1974
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. George J Race, Dean, A Webb Roberts Center, 3500 Gaston Ave, Dallas 75246

Medicine and Surgery
Title: Annual Conference in Medicine and Surgery—"The Thyroid"
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Oct 19, 1974
Guest Speakers: Dr. George Crile, Cleveland, Ohio; Dr. Robert L Peake, UTMB at Galveston
Fee: $35
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. W J Hardin, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

Obstetrics and Gynecology
Title: Recent Advances in Obstetrics and Gynecology
Sponsors: Scott and White Memorial Hospital, Temple
Location: Scott and White Memorial Hospital, Temple
Date: Oct 25-26, 1974
Fee: $35
Credit: Category I, AMA Physician's Recognition Award
Guest Speakers: Dr. Norman F Gant, UT Southwestern Medical School at Dallas; Lt Col Rudi Ansbacher, San Antonio; Dr. Kenneth Gottesfeld, Denver
Contact: Dr. Paxton H Howard, Director, Continuing Medical Education, Scott and White Memorial Hospital, Temple 76501

Title: Postgraduate Symposium in Obstetrics and Gynecology, "What's New and Important in OB-GYN"
Sponsors: Dept of OB-GYN, UT Southwestern Medical School; Parkland Memorial Hospital; A Webb Roberts Center, Dallas
Location: Dallas
Date: Oct 16-19, 1974
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Daniel E Scott, Dept of OB-GYN, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Ophthalmology and Otolaryngology
Title: Ophthalmology and Otolaryng-

ology for Primary Care Physicians
Sponsors: San Antonio Ophthalmology and Otolaryngology Society
Location: UT Medical School at San Antonio
Date: Oct 18-19, 1974
Fee: $85
Credit: 12 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Public Health
Title: Sudden Infant Death Syndrome
Sponsors: UT Health Science Center at San Antonio; UT School of Nursing at San Antonio
Location: UT Medical School at San Antonio
Date: Oct 25, 1974
Fee: $10
Designed for: Medical, nursing, and allied health personnel
Guest Speakers: Dr. J Bruce Beckwith, Seattle; Carolyn Szybist, RN, Chicago
Credit: 6 prescribed hours AAFP; Category 1, AMA Physician's Recognition Award
Contact: Ms. Dorothy Moses, RN, Assistant Director of Continuing Education, UT Nursing School, 7703 Floyd Curl Dr, San Antonio 78284

Psychiatry
Title: Folk Medicine in Mexico and Southwestern United States
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Oct 3, 1974
Fee: $15
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Psychological Understanding of Neurosis
Sponsors: Dept of Psychiatry, UT Health Science Center, Dallas
Location: Dallas
Date: Sept 17, 1974,-June 3, 1975, Each Tuesday, 7:15-8:45 p.m.
Fee: $350
Designed for: Practicing psychiatrists, residents, psychologists
Contact: Dr. Asa W DeLoach, 8200 Walnut Hill Lane, Dallas 75231

Radiology
Title: Radiology of the Gastrointestinal System
Sponsors: American College of Radiology
Location: Chicago
Date: Oct 18-20, 1974
Fee: $200 members and residents; $240 nonmembers
Credit: Category I, AMA Physician's Recognition Award
Contact: American College of Radiology, 6900 Wisconsin Ave, Chevy Chase, Md 20015

Title: Kenneth Gilbert Seminar in Radiology and X-Ray Technology, "Non-Surgical Diagnostic X-Ray Techniques"
Sponsors: Dept of Radiology, Baylor University Medical Center; A Webb Roberts Center, Dallas
Location: Beasley Auditorium, BUMC, Dallas
Date: Oct 4, 1974
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. George J Race, Dean, A Webb Roberts Center, 3500 Gaston Ave, Dallas 75246

Urology
Title: Postgraduate Seminar in Urology
Sponsors: South Central Section of American Urological Association
Location: UT Health Science Center at Dallas
Date: Oct 25-27, 1974
Fee: Approx $200
Contact: Dr. Paul C Peters, Chairman, Urology Division, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

NOVEMBER

Obesity
Title: Obesity—Successful Management
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Nov 2, 1974
Fee: $40
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Ophthalmology
Title: Pediatric Ophthalmology Symposium
Sponsors: UT Medical School at Houston
Location: Hermann Hospital, Houston
Date: Nov 9, 1974
Fee: None
Credit: 8 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Malcolm Mazow, 1121 Hermann Professional Bldg, Houston 77025

Orthopedics
Title: Upper Extremity Trauma
Sponsors: American Academy of Orthopaedic Surgeons
Location: San Antonio Convention Center
Date: Nov 20-22, 1974
Fee: $150 physicians; $50 residents (with letter from chief)
Contact: Department of Continuing Education, American Academy of Orthopaedic Surgeons, 430 N Michigan Ave, Chicago 60611

Surgery
Title: Pre-Op and Post-Op Management of Surgical Patients
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Nov 23-24, 1974
Fee: $75
Credit: 9 prescribed hours AAFP; Category 1, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

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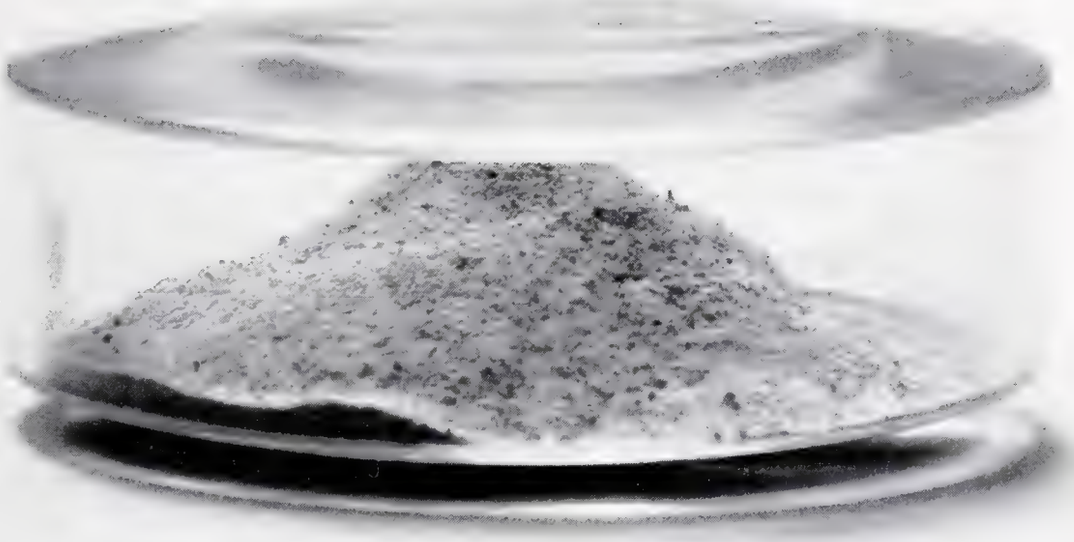

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The *title* should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

The *author's names* and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

The *text* should be narrative with complete sentences, *few abbreviations,* and logical subheading. For *spelling and usage* the editors follow "Dorland's Illustrated Medical Dictionary," 24th edition, and "Webster's Third New International Dictionary, Unabridged." *Quotations* must give credit to both author and source. A concise *introductory summary* is required.

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, top, author's name, and title of article in brief. *Legends* should be in complete sentences, numbered, and typed on a separate sheet. *Color illustrations* are authorized if they are of special value.

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Editorials should be prepared in the same general manner, and should be written in clear, concise language. They should be 300-500 words in length (about two to three pages typed with double spacing.)

Contributions to the news section should be sent to the Editorial Offices, 1801 N. Lamar Blvd., Austin 78701, by the 5th of the month preceding the month of publication.

PUBLICATION INFORMATION

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Contributions, previously unpublished, are welcomed for review. News and other items should be sent to the Editorial Offices six weeks prior to publication. All contributions are sent at the owner's risk.

Scientific Articles are reviewed by technical and specialist consultants and are selected for publication in Texas Medicine by the Scientific Publication Committee, which is appointed by the Board of Publication. Editorials and other articles are subject to review by officers of the Texas Medical Association, appropriate expert and technical consultants, and representatives of county medical societies when in their purview.

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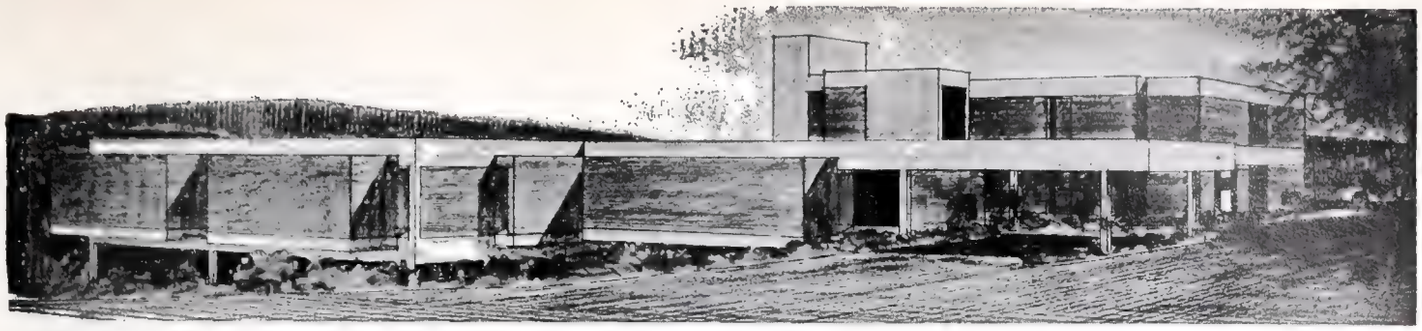

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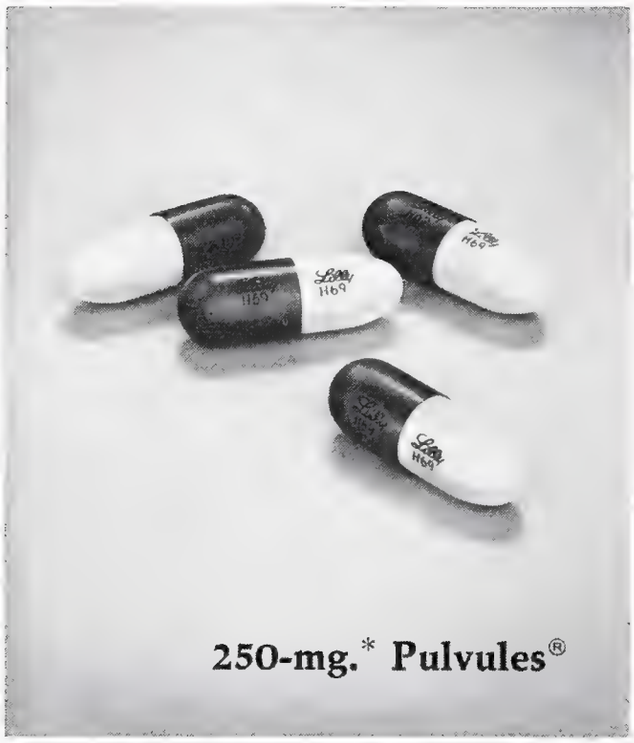

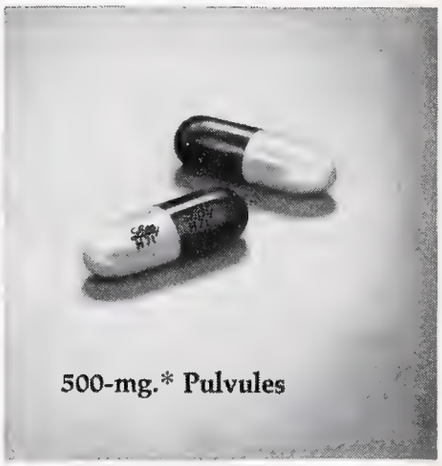

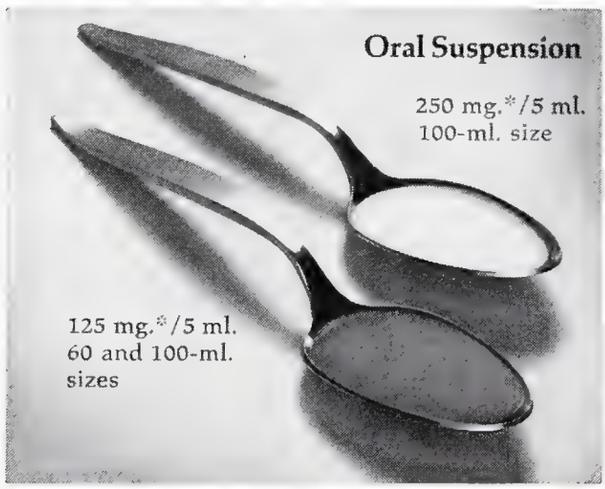

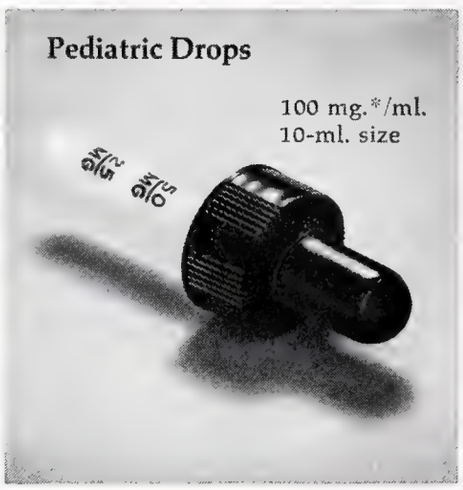

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Abolition of opiate hunger in humans following bilateral anterior cingulotomy

Timothy Sharma, MD

The persistence of opiate drug hunger in addicts even though they are adequately treated by present known methods is reviewed. The total and permanent abolition of this opiate drug hunger has been noticed incidentally in three addicted patients who had bilateral anterior cingulotomy for intractable pain. The cases are reviewed and the results are described. A relationship between the affective perception of pain and opiate craving is recognized. This relationship is discussed and a point is made of the possibility that the addicting process may involve some change in the central nervous system. A follow-up research paradigm is suggested on subhuman primates. *Finally, it is stressed that this article is not an endorsement for routine bilateral anterior cingulotomy for opiate addiction, but rather is to focus attention on a significant finding, which urgently requires further research in view of the severity of the opiate addiction problem.*

Because of the relative paucity of undisputed scientific data which correlate brain physiology, biochemistry, and electrical activity with anatomy, it is expected that psychosurgery can be subjected to almost inexhaustible criticisms. These criticisms, if made objectively and without emotionalism, are essential and should be encouraged. Too much enthusiasm with the widespread use of psychosurgery can lead to the unfortunate situation that was associated with the overuse of psychosurgery about 25 years ago.[1,2] It is therefore incumbent upon the physician, proponents, and critics alike, to evaluate, reevaluate, and continue to experiment in this field at a rate that is commensurate with the advances made in the fields of brain chemistry, physiology, and electrical brain activity. The purpose of this article is to illustrate that it is even possible to learn more about the brain and behavior by simple observation in cooperation with planned experiments; as will be discussed later, the discovery of the abolition of opiate hunger by bilateral anterior cingulotomy was not a planned experiment, but rather an observation made on patients who were treated for other psychiatric problems by psychosurgery.

In an earlier article[3] it was observed that opiate hunger was completely abolished after bilateral anterior cingulotomy. The significance of this phenomena was fascinating since it has never been demonstrated that opiate hunger in a severely addicted individual can be abolished. Addicts who are on methadone maintenance programs still continue to have a strong opiate hunger or "drug craving." The small group of about 2 to 5% who are able to remain abstinent by treatment in therapeutic milieu programs do so only by incessant community supervision and program involvement. This small group, when interviewed, was found to continue to crave opiates and "if conditions were suitable" for them they would return to their drug-taking habits. Further evidence to support the phenomena of opiate craving is vividly described in Gay's book, "It's So Good Don't Even Try It Once."[4] The incidental finding that this drug craving was abolished by merely cutting a few fibers of the cingulate gyrus provoked curiosity, and other cases were examined. These included all new candidates for psychosurgery. The goal was to see if this phenomenon was constant and permanent.

The early works which related psychosurgery with the treatment of opiate addiction were done as planned experiments on animals.[5,6] However, both Foltz and Wik-

ler[6] stressed the amelioration of the "withdrawal" syndrome in their experiments. There was no mention or implication of a total and permanent abolition of the opiate addiction after the withdrawal or abstinence syndrome was over. Even though it is not necessary to do psychosurgery in order to withdraw animals from opiates, these early experimental works did shed light on the possible relationship between certain areas of the brain and the opiate addiction process. Domesick's work[7] in 1969 on the rat brain indicated that neuronal pathways connect the thalamus with the frontal lobe; these pathways appear to traverse predominantly Broca's area 24 of the cingulum bundle. Interruption of these neuronal pathways at this site in the cingulum bundle was useful in altering the affective perception of pain.[3] The incidental finding of abolition of opiate hunger, also by the same procedure, would indicate that there is a relationship between the affective perception of pain and opiate hunger.

Case Reports

Several patients who were candidates for cingulotomy were interviewed both before and after surgery. These were patients with severe obsessive-compulsive neuroses, unmanageable affective disorders, severe anxiety, and intractable pain. Only those patients with intractable pain were selected as case studies. Naturally only these cases showed severe addiction to opiates. Patients with severe anxiety and unmanageable affective disorders also were found to be abusing opiates, but these cases were not considered for further study because their addiction was not considered severe enough by the author.

Three cases were finally selected for further observation. All three patients had certain features in common: they all suffered from severe, incapacitating, intractable pain; they used opiates as analgesics in large quantities and frequent doses to ease the pain; and they rapidly developed tolerance to the analgesic effects of the opiates and consequently kept on increasing their doses. They not only desired the analgesic effect of the opiates, but also craved the euphoric effect of the drug. They showed evidence of a severe abstinence syndrome when denied opiates or when the abstinence syndrome was precipitated by the parenteral use of Nalline. The abstinence syndrome included vomiting, muscle cramps, and severe anxiety to the point of panic. All three patients used opiates heavily for 3 to 15 years. The patients prior to surgery were very skeptical about the abolition of their "opiate need"; they all indicated that the surgery might help their pain, but they certainly wanted to continue to enjoy the euphoric effects of the opiates. These patients were fully aware of the dual effect of the opiates they were consuming so copiously.

Procedures and Methods

The procedures were all performed through open craniotomies. Bilateral anterior cingulotomy was done 3.5 to 4 cm posterior to the tip of the frontal horn or an area corresponding to Broca's area 24 of the cingulate gyrus. The patients recovered from surgery satisfactorily within a few days and showed no untoward physical sequelae. In addition, there was no evidence of cognitive deficits.[3] In one case there was a conspicuous flattening of the patient's affect, which cleared up in three weeks.

Results

Apart from modifying the patient's affective perception of pain and making life tolerable, the patients showed no evidence of an abstinence syndrome of any significance. This is in keeping with the findings of Foltz and Wikler.[5,6] In addition, there was no opiate craving. Other findings observed included a decrease in anxiety. One patient's anxiety had been so severe that she required 300 mg of Mellaril daily and smoked two and one-half packs of cigarettes daily prior to surgery. After surgery, the need for the major tranquilizer and cigarettes was completely abolished. This interesting relationship also merits further research.

Discussion

Psychosurgery has been practiced since antiquity. Trephining the skull for physical or psychological reasons has been widely practiced. New bone growth around the trephined sites indicated that the subjects lived after the surgery. However, modern psychosurgery began when Moniz[8] first proposed distruction of the nervous pathways in frontal lobes as a form of treatment for certain psychiatric disorders. Since the time of Moniz, psychosurgery has been used for the treatment of severe obsessive-compulsive neuroses,[9] unmanageable affective reactions,[10] and intractable pain.[11,3] However, psychosurgery has never been known to be used for the abolition of opiate hunger. This article points out the usefulness of this type of surgery in opiate craving. However, it should not be misconstrued as representing a routine procedure for the treatment of severe opiate addiction.

The patients discussed will need to be followed indefinitely. One patient had surgery one year ago; there has been no return of opiate craving. The two other patients had surgery more recently. Thus far, there is no indication of a return of opiate craving. One wonders whether the changed affective perception of pain is really the reason for the abolition of opiate craving. If this were so, then one still has to explain the absence of the need for the euphoric effects of opiates, which all three patients manifested and recognized. There seems to be strong evidence for a relationship between the affective perception of pain and opiate drug hunger in these cases. However, since interruption of neuronal pathways can abolish drug craving as well as anxiety, one can only strongly suggest that the addiction process may involve a change in the central nervous system. This change may occur in the chemistry, receptor sites, including any part of the neuronal cell membrane, or even the cell nucleus. Only further research can answer these puzzling questions.

More research and observation on subhuman primates addicted to opiates will have to be done before I am convinced that bilateral anterior cingulotomy is an "ideal" treatment for opiate addicts. Perhaps a simple research proposal would involve addicting monkeys to opiates, then performing bilateral anterior cingulotomy and observing whether there is a persistence of opiate craving. If there is an abolition of opiate craving, then attempts should be made to readdict these cingulectomized animals. If the researcher failed to readdict the animals, then certainly we could assume the cingulotomy produced a permanent abolition of opiate hunger. If this proved to be the case, then this would be a significant break-

through in the treatment of certain addicts who fail even on a "liberal methadone maintenance program."

The foregoing statement does focus on a small group of individuals who appear to have an insatiable opiate hunger. I have observed ten patients in a population of 300 addicts on a methadone maintenance program which I evaluated. These individuals were described by the staff as "impossible to please." They demanded more and more methadone even though they showed methadone toxicity. If given all the methadone they wanted, these patients would have overdosed in a short time and killed themselves, even though consciously they do not want to commit suicide. It would appear that these patients' cravings were insatiable; they were not seeking to satisfy an average type of opiate hunger. It appeared they were seeking something else, perhaps oblivion or nirvana through ever increasing doses of opiates. This drug-craving behavior usually caused them to disrupt the methadone maintenance programs, become troublemakers, and use additional opiates from off the streets even though they might be receiving 100 mg or more of methadone daily from the methadone maintenance program.

If this extreme group of patients were not on a methadone maintenance program where their behavior was monitored closely, they would normally be "scoring on the streets," and on such occasions when the supply of heroin was plentiful they would use repeatedly increasing doses. Finally, they may reach a stage of overdose and incapacitating narcosis when they are unable to physically "fix" any more. These are the individuals who end up dead from an overdose on the streets. My estimate of 10 in 300 may be conservative. It is possible that the street addict ratio may be much higher. These individuals will eventually kill themselves "accidentally" whether they are on methadone maintenance programs or not. It is certainly worth a try to give these individuals a different form of treatment, such as bilateral anterior cingulotomy rather than run the daily risk of the patient terminating life by an overdose.

It should be pointed out that bilateral anterior cingulotomy at Broca's area 24 is a relatively safe operation when done by the open craniotomy method.[3] Other approaches such as a closed stereotactic type of operation have been shown to produce cognitive deficits.[12,13] Other forms of psychosurgery such as thalamectomy and thalamotomy are fraught with technical hazards and untoward residual effects.[14,15]

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Neurosurgical relief of pain: Recent developments

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During the past decade, considerable progress has been made in the neurosurgical treatment of pain. These newer procedures are reviewed in five categories, with emphasis on historical development, current technique, advantages, disadvantages, and results.

In the late 1800s and early 1900s, two well-defined primary pain pathways were discovered—the lateral spinothalamic tract and the spinal trigeminal tract. The basic features of these two pathways are as follows:

If a painful stimulus contacts the skin anywhere on the body, aside from the face, it is detected by the ending of a neuron having its cell body within the appropriate dorsal spinal nerve root ganglion. The central process of this first neuron extends into the spinal cord in the lateral bundle of the dorsal root. Some branching of the central process may occur, with limited ascending and descending extension in Lissauer's tract to adjacent spinal levels, but the main synapse (probably through one or more short intermediary neurons) is to a second neuron in the dorsal horn of the spinal cord. The axon of the second neuron crosses to the other side within the anterior white commissure and ascends in the lateral spinothalamic tract to synapse with a third neuron in the posterolateral ventral nucleus of the thalamus. This third neuron then projects through the internal capsule to the postcentral sensory area of the cerebral cortex.

Pain arising in the face is thought to be transmitted in analogous fashion over a three-neuron chain. The first neuron has its cell body in the gasserian (trigeminal) ganglion and its central axon in the trigeminal descending tract. This neuron synapses with a second neuron in the spinal nucleus of the trigeminal, which sends its axon in ascending fashion to the posteromedial ventral nucleus of the thalamus. From there a third neuron transmits pain sensation to the postcentral sensory gyrus.

With the discovery of these two pain pathways, it was thought that pain could be abolished by the surgical division of the appropriate pathway at a suitable level.[1] In large part this has proved to be true in relationship to epicritic pain, exemplified by the type of sharp, well-localized pain caused by a pinprick. Epicritic pain is thought to be transmitted along the relatively rapidly conducting myelinated axons within the lateral spinothalamic tract or spinal trigeminal tract. In these systems there are few synaptic delays, and the pain is recognized shortly after the painful stimulus is applied. Similarly, epicritic pain subsides relatively quickly after the stimulus is removed. As expected, surgical division of the lateral spinothalamic tract (anterolateral cordotomy, spinothalamic tractotomy) and of the trigeminal sensory root or descending tract (retrogasserian neurotomy, trigeminal tractotomy) has been shown to be effective in relieving pain caused by malignant neoplasms, tic douloureux, etc.

Yet it has also become apparent that such procedures may not provide lasting relief, even when they are performed well technically. Moreover, when the pain recurs in such cases, it often has a different character (eg, anesthesia dolorosa, postcordotomy pain). Such pain is described in various ways, but it is often said to have a burning quality. This protopathic type of pain is less well localized than epicritic pain; it usually covers a larger area of the body. Protopathic pain often occurs with-

out an external stimulus (central pain), and it may fluctuate in intensity without an apparent reason. After a painful stimulus, there is usually a noticeable delay before the pain is felt. It lasts longer and subsides more slowly than epicritic pain. Finally, whether protopathic pain results from disease or surgical division of the epicritic pain pathways, it is much more difficult to treat. Because of these and other facts, protopathic pain is thought to be transmitted, at least in part, along a multiple neuron net, having slowly conducting unmyelinated or lightly myelinated axons, within poorly defined pathways (perhaps involving the reticular system or Lissauer's tract, or both). It has been postulated that in such a system, reverberating circuits may also develop, causing further prolongation of pain. This transmission network appears to be a phylogenetically older system that is somehow suppressed by the newer lateral spinothalamic and spinal trigeminal tracts unless these are damaged by disease or by design.

Stereotactic Interruption of Primary Pain Pathways

Various stereotactic procedures have been devised in recent years to interrupt pain transmission within the lateral spinothalamic tract or spinal trigeminal tract without resorting to an open operation. They involve the introduction of a metal electrode under local anesthesia, using radiographic coordinates and monitored responses to electrical stimulation for correct localization of the tip of the electrode. A destructive lesion is then made around the electrode tip, usually by passing a radiofrequency current through it. Such procedures are less traumatic for the patient than open operations done under general anesthesia, and both hospitalization and recuperation usually require significantly less time. However, the same problem with recurrence of pain, as discussed earlier, exists with either approach to the interruption of the primary pain pathways.

Stereotactic Rhizotomy of the Articular Nerve of Luschka

In 1971, Rees reported the performance of 1,000 operations for the relief of back pain in which he cut the posterior ramus of a segmental nerve proximal to its entrance into the articular capsule of the intervertebral facet, repeating this procedure at several levels on each side.[2] Shealy et al subsequently developed a technique for performing such operations stereotactically, and in 1973 reported the results in 225 cases so treated at three separate medical centers.[3] Those who fared the best were the patients with back pain due to osteoarthritis, osteoporosis, compression fractures, or intervertebral disc degeneration who had had no previous back operations. Of 81 such patients, 71 had good or excellent results. In contrast, only 21 of 61 patients with pain after lumbar fusion operations experienced the same degree of relief.

Although it is simpler and less traumatic than the standard operations for low back pain of spinal origin, this technique is still being developed and it has not yet been shown to be of sufficient value to warrant its widespread use.

Stereotactic Anterolateral Cervical Cordotomy

Between 1963 and 1965, Mullan and his colleagues[4,5] and Rosomoff et al[6] developed the initial technique for percutaneous radiofrequency cervical cordotomy.

Presently the procedure is performed under local anesthesia with the patient lying supine. A lumbar puncture needle is inserted into the neck approximately 1 cm caudal to the mastoid tip, and is pushed into the spinal subarachnoid space just anterior to the dentate ligament, between C-1 and C-2 (Fig 1). An insulated wire electrode with an exposed sharp tip is passed through the needle and is ad-

vanced toward the ipsilateral anterior quadrant of the spinal cord. Initially the path of the electrode is guided by radiographic techniques, including the injection of iodophenylundecylate (Pantopaque) and air into the subarachnoid space, if necessary, to outline the dentate ligament and the anterior surface of the cord. A sudden change in electrical impedance occurs when the electrode penetrates into the cord. Final placement of the electrode tip is determined by radiographic measurements and by the patient's responses to electrical stimulation. A radiofrequency current is then used to coagulate an area of the spinal cord at the tip of the electrode. The electrode can be repositioned and additional lesions created if the first is inadequate.

At this level of the spinal cord, axons concerned with respiration and autonomic function are located in the anterior quadrants. Therefore, respiratory insufficiency may follow high cervical cordotomy, especially if the patient already has pulmonary disease or if the cordotomy is performed bilaterally. Similarly, urinary retention may complicate the patient's postoperative course. These complications can be obviated to some degree by performing the cordotomy at a lower level. Although the lateral approach is not feasible below C-2, the electrode can be inserted into the cord from an anterolateral direction through an intervertebral disc in the lower cervical area.[7]

Stereotactic cervical cordotomy is most valuable in the treatment of unilateral pain in the trunk and/or an extremity resulting from a malignant neoplasm. If it is used for the treatment of benign conditions, there is a distinct possibility of pain recurrence, as after open cordotomy.

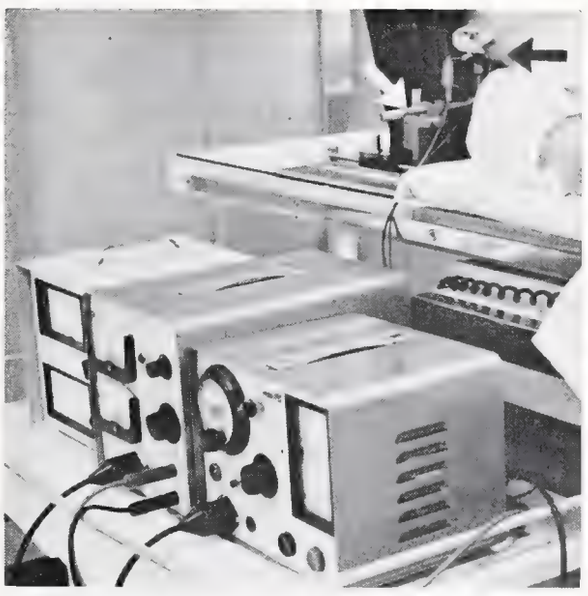
Stereotactic Mesencephalotomy and Thalamotomy

Stereotactic operations have also been designed to interrupt the lateral spinothalamic pathway within the midbrain or thalamus. In general, these operations have not been as successful as cordotomy. They are more difficult to perform and good results have been harder to obtain. A discussion of the specifics of these procedures is outside the scope of this article.

Stereotactic Coagulation of the Gasserian Ganglion

This percutaneous technique offers the advantages of reduced morbidity and increased precision when compared with the traditional retrogasserian neurotomy performed under direct vision through a temporal craniectomy. It has given the neurosurgeon the potential ability to produce analgesia over localized areas of the face without causing loss of touch sensation or weakness of the muscles of mastication. It has proved especially valuable in the treatment of tic douloureux which has resisted simpler measures, including the administration of carbamazepine (Tegretol).

Percutaneous electrical destruction of the gasserian ganglion and its immediate connections dates back to 1931,[8] and the



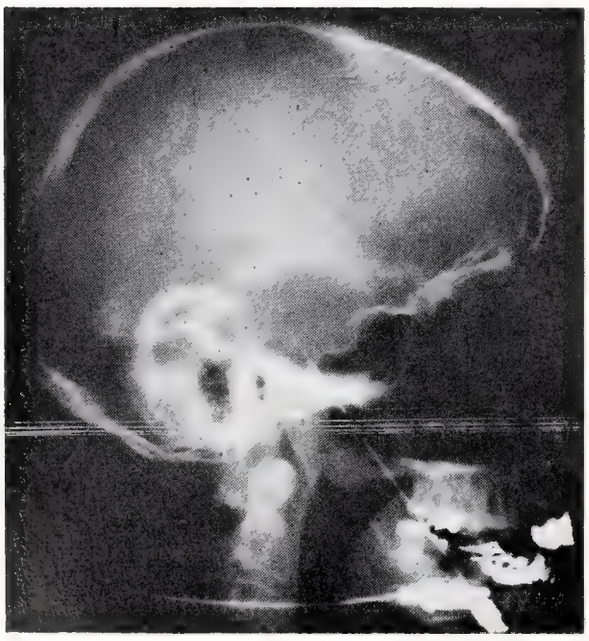
1. Mock-up of a percutaneous cervical cordotomy, demonstrating the lumbar puncture needle and electrode in the neck (black arrow), a micrometer stage for holding and manipulating them (white arrow), and the impedance monitor, stimulator, and radiofrequency lesion generator necessary for localizing the electrode tip within the spinal cord and producing the lesion.

procedure has been performed extensively in Germany since that time. In the United States, stereotactic gasserian coagulation with radiofrequency current has not been employed until recent years.[1,9-12]

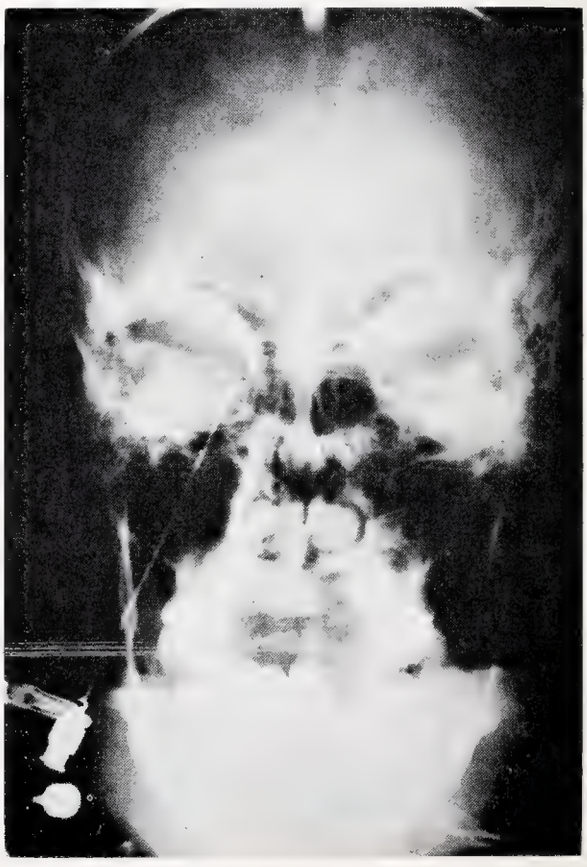
The procedure is presently performed with the patient lying supine, using local and intravenous anesthetic agents. A lumbar puncture needle is inserted into the cheek on the painful side, 2 to 3 cm lateral to the lateral angle of the mouth, and with care to avoid penetrating the oral cavity, it is advanced through the foramen ovale at the base of the skull. This needle insertion is guided by periodic x-ray films in the lateral and mentovertex or anteroposterior projections. As the needle enters Meckel's cave, cerebrospinal fluid will drip from its hub when the stylet is removed. An electrode is then passed through the needle into the region of the junction of the peripheral trigeminal divisions, the gasserian ganglion, and the central trigeminal sensory root. Axons from the chin are contacted first. With progressively deeper penetration, the electrode encounters fibers from the cheek and then the forehead (Figs 2,3). After electrical stimulation has established the exact location of the electrode tip within the trigeminal nerve, a radiofrequency lesion is made in short increments, attempting to achieve loss of pain sensation without loss of touch sensation and to spare corneal sensation. The patient is usually discharged from the hospital on the following day.

Nugent et al performed 72 such operations in 65 patients, with complete relief of tic douloureux in all but one patient, 89% preservation of deep touch sensation, and 65% preservation of light touch sensation.[12] However, the motor branch was definitely impaired in eight patients, and postoperative anesthesia dolorosa developed in three. Sweet and Wepsic reported immediate relief of pain in 91% of 214 patients with tic douloureux, but a late recurrence rate from two to six years later of 22%. Six patients had postopera-

2. Sterotaxic trigeminal coagulation. Lateral roentgenogram, demonstrating the lumbar puncture needle extending through the foramen ovale and the electrode projecting into the sensory fibers from the patient's forehead.



3. Same as Fig 2, anteroposterior view.



tive paresthesias, 28 had corneal anesthesia, and 119 had some impairment of trigeminal motor function.[10]

Stereotactic Descending Trigeminal Tractotomy

This procedure was introduced in 1967 to interrupt the descending trigeminal tract without the risks of general anesthesia and suboccipital craniectomy and with the advantages of localization by electrical stimulation and controlled lesion production. It is still in the developmental stages.

Electrical Stimulation

It has been recognized for centuries that pain can be reduced or abolished by counterirritation. Acupuncture and the mustard plaster have each been used for many years to mask pain, probably by stimulating appropriate peripheral nerve endings. Not until recently, however, have these phenomena been studied scientifically and the results applied to the treatment of painful conditions.

In 1965, Melzack and Wall proposed a new theory that has added a great deal to the understanding of pain mechanisms and has led to the development of certain operations for the relief of pain.[13] They postulated that the substantia gelatinosa of the spinal cord functions as a gate control system that modulates sensory input before it influences the central transmission cells in the dorsal horn, and that the brain also exerts control over this modulation process, perhaps via an afferent and/or efferent system in the dorsal columns of the spinal cord. In other words, the message of pain can be altered or suppressed before it is perceived. Nerve impulses entering the spinal cord along the large diameter axons, such as those subserving touch and proprioception, exert an inhibiting influence through the substantia gelatinosa on the impulses entering along the small fibers, such as those conveying pain. This theory suggested to its authors, among other things, that the "gate" might be "closed" to pain by enhancing large fiber input into the substantia gelatinosa.

Acting on this suggestion, in 1967 Wall and Sweet demonstrated that the electrical stimulation of large diameter fibers (which have a lower electrical threshold than small fibers) in a human peripheral nerve can interfere with the person's recognition of pain in the distribution of that particular nerve.[14] In the same year, Shealy et al showed that similar electrical stimulation of the dorsal columns of the spinal cord in cats can abolish the various responses normally caused by painful peripheral stimuli.[15]

Electrical Stimulation of the Skin

Cutaneous electrical stimulation has been used in the United States for at least 100 years to treat painful conditions. A simple battery-powered stimulator, marketed under the trade name of Electreat, has been widely used in this regard. However, the scientific evaluation of this form of therapy did not begin until the 1965 report of Melzack and Wall cited previously.

Since 1970, a number of neurosurgeons have investigated electrical stimulation of the skin for relief of chronic pain,

4. One of the commercially available electrical cutaneous stimulators, with adjustable voltage and pulse frequency.

using a variety of devices such as a battery-powered unit with two electrodes (Fig 4). As a general rule, about 25 to 40% of patients so treated will experience appreciable pain relief. However, the disadvantages of the procedure include the continuing necessity of performing the stimulation procedures and the occasional contact dermatitis thought to be caused by the adhesives utilized to hold the electrodes against the skin or by the electrode material itself. Cutaneous electrical stimulation is best applied to the treatment of pain felt in a dermatomal distribution, such as post-herpetic neuralgia, or pain involving relatively small areas of the body. However, its success in the individual patient is directly related to the amount of time and effort spent in the experimentation necessary to establish the most effective sites for electrode placement and parameters of stimulation in that particular person.

Electrical Stimulation of Peripheral Nerves

This approach has limited applicability and has not been widely performed. The procedure is of greatest value in the management of patients with phantom lower extremity pain. In such cases Nashold[16] employs an implanted device to receive the electrical signals transmitted through the skin from a battery-powered external stimulator. He fastens electrodes to the ipsilateral sciatic nerve, and passes the attached insulated wires through a subcutaneous tunnel, implanting the receiver at the other end subcutaneously in the lateral or anterior thigh or in the lower abdominal wall, avoiding areas that might interfere with the patient's use of a lower extremity prosthesis. The circular antenna of the external stimulator is taped or otherwise held against the skin over the receiver during the periods of electrical stimulation. Such stimulation has effectively diminished the phantom limb pain in some patients.

Electrical Stimulation of the Dorsal Columns of the Spinal Cord

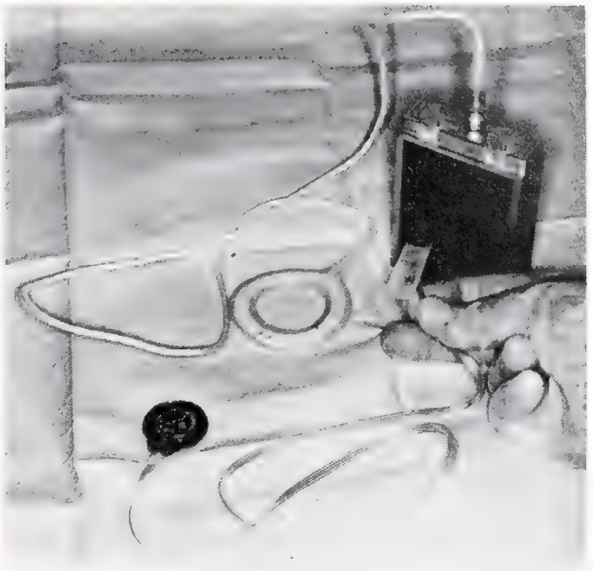
Following their pioneering work in animals,[15] Shealy and his associates reported in 1967 the first trial of dorsal column stimulation for pain relief in man.[17] Since then, hundreds of patients have been treated in this fashion by a number of different neurosurgeons. The exact mechanism of action of the dorsal column stimulator is still in question, but it may modify pain transmission by supplying antidromic impulses that are propagated down the dorsal column fibers to the substantia gelatinosa, or by providing orthodromic impulses that are propagated up the dorsal columns to activate certain neurons within the brain, which in turn influence the substantia gelatinosa through descending pathways.

A two-part device is employed, similar to the peripheral nerve stimulator used by Nashold (Fig 5). A laminectomy is performed and the plastic sheet holding the electrodes is placed either within a surgically created dural pocket, within the subdural space, or within the subarachnoid space over the dorsal surface of the spinal cord in the upper thoracic or cervical region. The attached wires are passed through a subcutaneous tunnel and the receiver is buried subcutaneously in the pectoral or axillary area, or in some other accessible location (Fig 6). The patient transmits electrical impulses to the implanted device from a battery-powered stimulator via an antenna that is held against the skin over the implanted receiver.

Nashold and Friedman[18] studied 30 patients in detail who had been followed for periods of 9 to 18 months after operation. Of these, 40% had excellent or good relief of pain. However, 43% were not helped, and a variety of complications were encountered, including radicular pain caused by the stimulator, cerebrospinal fluid leaks along the subcutaneous tract to the receiver, and the development of fibrosis about the electrodes. Seven of

the implanted devices had to be removed.

The greatest drawback to dorsal column stimulation for the control of pain appears to be its unpredictability; no preoperative method has yet been found to tell with certainty whether the patient will obtain significant relief from the dorsal column stimulator. Preoperative psychological testing may be of some help, as before any other type of surgery for pain, but the only method discovered thus far by Sweet to have improved his success rate has been a trial stimulation of the dorsal columns in the operating room.[19] The patient is awakened after the device has been implanted, and indicates the effect of the electrical stimulation on his pain. If the effect is inadequate, the patient is again anesthetized and the stimulator is repositioned. The entire process is repeated until a satisfactory result is obtained.



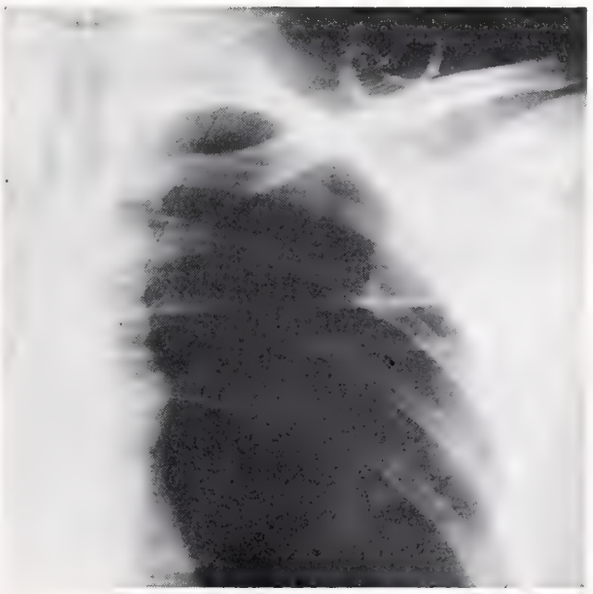
5. One of the commercially available dorsal column stimulators, showing the implanted portion (receiver, insulated wires, and electrodes) and the external portion (stimulator, insulated wires, and circular antenna).

Electrical Stimulation of Other Neural Structures

The trigeminal nerve, various thalamic nuclei, and other areas within the central nervous system have been stimulated electrically through implanted electrodes in an attempt to control various types of pain in selected cases. However, as with stereotactic mesencephalotomy and thalamotomy, these procedures are highly experimental and are beyond the scope of the present paper.

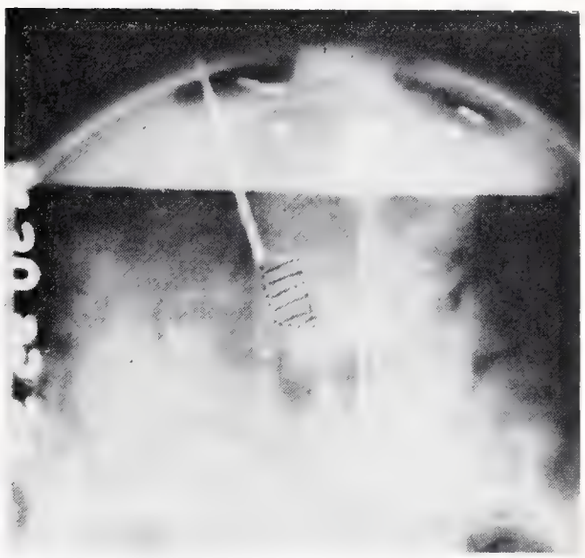
Psychosurgery

After the sensation of pain is received and transmitted to the brain, various conscious, subconscious, and affective reactions occur, including perception and evaluation of the pain and certain motor responses to it. Psychological factors such as past experience, attention and emotion strongly influence these responses. There has been a recent interest in adapting stereotactic techniques to the surgical destruction of certain areas within the brain in an attempt to modify these "psychic" responses to pain.



6. Radiographic appearance of a dorsal column stimulator, demonstrating the four electrodes overlying the dorsal surface of the spinal cord at T-2, and the receiver in the subcutaneous tissues of the left pectoral region.

7. Stereotaxic cingulumotomy. Lateral view to show electrode placement.



8. Same as Fig 7, anteroposterior view. Target area is drawn on roentgenogram. (Courtesy of Dr. Blaine S. Nashold, Jr.)

Since the pioneering work of Foltz and White in 1962,[20] the primary target has been the anterior portion of the cingulum (an association bundle) and the cingulate gyrus (part of the limbic lobe) on each side. Electrodes are guided stereotactically to the target areas through bilateral frontal burr holes (Figs 7,8), and destructive lesions are made with radiofrequency current. Unlike prefrontal lobotomy, this procedure is not followed by undesirable changes in intellect, memory, or personality. About 67% of patients so treated will obtain some degree of pain relief.[21]

Microsurgical Procedures

With the magnification and illumination afforded by the surgical microscope, it has been possible in recent years to refine some of the existing operations for pain and to further develop some additional approaches. For example, the microsurgical approach has permitted Jannetta to discover vascular abnormalities and other pathological processes as etiological agents in trigeminal neuralgia, and to treat the pain by correcting the offending lesion rather than by dividing the nerve.[22] Jannetta has also divided the nervus intermedius and the superior vestibular nerve in 10 patients with refractory cluster headaches (Horton's cephalgia), a procedure that had been much more difficult to perform prior to the introduction of microsurgical techniques.[22]

Spinal Intrathecal Injections

The spinal intrathecal injection of alcohol or phenol has been used for four decades in the management of certain types of pain, and the simple technique of barbotage of cerebrospinal fluid through a lumbar puncture needle has also been known to have some effect in alleviating pain. Although such procedures were overshadowed by later developments in the pharmacological and surgical relief of pain, they have received renewed interest lately.

In 1967, Hitchcock reported worthwhile

relief of pain in seven of 12 patients treated by the rapid irrigation of the lower spinal subarachnoid space with hypothermic saline.[23] A lumbar puncture was performed with the patient in the lateral position and with the affected side dependent. Cerebrospinal fluid was withdrawn until subatmospheric pressures were produced, and then 10 ml of saline solution at 2-4°C was rapidly injected. The physiological saline solution had been frozen until ice crystals had formed, and the supernatant fluid was injected. This fluid proved to be hyperosmolar, and subsequent studies have not settled the question as to whether the effects of the technique are due to hypothermia, hyperosmolarity, the chloride ion, the mechanical effects of the injection, or something else.

In any event, though they are simple to perform, such injections are often quite painful, with transient disagreeable paresthesias and muscle fasciculations. Some form of general anesthetic is now employed for the patient's comfort. The initial paresthesias and fasciculations are probably due to the transient activation of the larger axons in the dorsal and ventral nerve roots. However, there is still debate as to whether the alleviation of pain experienced by approximately half of the patients is due to trauma to critical numbers of small fibers in the dorsal nerve roots or to effects on the spinal cord itself. The procedure of intrathecal saline injection is of some value in the management of patients with painful pelvic malignancies, and may offer an alternative therapeutic approach in other painful conditions affecting the lower trunk or lower extremities. However, complications include occasional bowel and bladder dysfunction and paraparesis, so the procedure should not be taken lightly.

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Compensation and success of lumbar disc surgery

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Several reports have indicated that patients receiving compensation for back injury are less improved after lumbar disc surgery than are "private" patients.[1-5] However, many variables affect the results of lumbar disc surgery,[6,7] and reports implicating compensation as the cause of poor results are open to several criticisms: (1) compensation patients may be subjected to overdiagnosis and their poor results related to a higher incidence of negative findings at surgery; (2) some compensation patients may be treated conservatively for an unusually long time before operation, and prolonged nerve root compression can adversely affect the results of surgery[8]; (3) the compensation patient often has injured his back doing manual labor, and may be unable to resume heavy work despite an otherwise successful operation—if surgical results are classified by ability to return to work, compensation patients would show poorer results than patients with sedentary occupations.

Apparently not all physicians believe compensation affects the results of surgical treatment of ruptured lumbar discs. There is no specific mention of compensation influencing results of treatment in two recent books on lumbar disc disease.[6,7] Does compensation have an adverse effect on results of lumbar disc surgery? If so, why? To study these questions, controlling the variables mentioned above, a follow-up cohort study has been done.

Materials and Methods

Two hundred seventy-eight patients operated upon for a suspected ruptured lumbar disc were mailed a modification of the questionnaire described by Semmes,[6] and 260 replies (94%) were received. From 12 to 18 months had elapsed since surgery. All patients had been examined preoperatively by the author, their history and physical findings recorded uniformly on a standard form, myelogram results recorded when done, and surgical findings listed as either a normal disc, a degenerated disc, a protruded disc, or an extruded disc. Details of the patient population studied and the method of classifying findings on physical examination and at surgery have been described previously.[9]

Physical findings were divided into mechanical and neurological signs and subdivided into "good" and "poor." "Good" mechanical signs included two or more of the following: lumbar muscle spasm and limited motility; scoliosis, straight leg raising painful at less than 45°. "Poor" mechanical signs included straight leg raising painful at more than 45° and little or no paravertebral muscle spasm or loss of spine motion. "Good" neurological signs consisted of any two or more of the following: focal weakness, reflex asymmetry, or dermatomal sensory deficit. "Poor" neurological signs were any one of the above. Accordingly, each compensation patient was placed in one of the following mutually exclusive groups, and the selection of a noncompensation cohort was limited at the outset to the pool of similar patients within each clinical group: group 1, good neurological and good mechanical signs; group 2, good neurological and poor mechanical signs; group 3, poor neurological and good mechanical signs; group 4, poor neurological and poor mechanical signs; group 5, good mechanical signs only; and group 6, poor mechanical signs only.

The presence of compensation was recorded if there was clear-cut third-party

2. Results of surgery for ruptured lumbar disc syndrome.

Surgical Result*	All Patients		Compensation Patients		Noncompensation Cohorts	
	No.	%	No.	%	No.	%
Excellent	78	30	10	14	31	42
Good	115	44	11	15	28	39
Satisfactory	34	13	38	52	10	14
Poor	33	13	14	19	4	5
Total	260	100	73	100	73	100

*Categories defined in text.

financial responsibility, according to the patient, not only for medical services, but for loss of income due to lumbar disc disease. Most of these patients were covered by Workmen's Compensation because of on-the-job injuries, but some were under CHAMPUS or claimed liability from automobile accidents. About one-third (89/260) of the surgically treated patients had compensation, and 73 of these could be matched with a noncompensation cohort. Each compensation patient was paired with a control cohort, whose financial responsibility for the illness was clearly his own, according to the following criteria in order of importance: (1) physical signs (the clinical groups mentioned above); (2) type of disc abnormality found at surgery; (3) normal or abnormal myelogram; (4) age; (5) duration of symptoms; (6) sex; and (7) estimated degree of physical stress in work, whether light, medium or heavy (Fig 1).

Results

Results were classified according to the criteria of Odom et al.[10] An "excellent" result signified no residual symptoms and ability to carry out the usual occupation without impairment; "good" signified intermittent residual discomfort, not significantly interfering with work; "satisfactory" denoted subjective improvement but with significant residual limitation of physical activity; and "poor" indicated no improvement or worsening after surgery.

In the 260 patients, an extruded disc was found in 143 (55%), a protruded disc in 57 (22%), a degenerated disc in 32 (12%), and a normal disc in 28 (11%). The incidence of these findings was not significantly different in the 73 compensation patients studied. As shown in Fig 2, there is a difference in the results reported by compensation patients and their controls ($p < 0.01$). Compensation patients reported one-third as many excellent results and four times more poor results.

The categories classify results by both relief of symptoms and residual physical impairment. Fig 3 analyzes residual physical impairment only, in terms of ability to return to work. All noncompensation patients were working one year after surgery, but 17 (23%) of the compensation patients were not, a significant difference ($p < 0.001$). Fourteen of the 73 noncompensation patients (19%) who were working had changed to lighter work; 18 of the 56 working compensation patients (32%) had changed to lighter work. However, this difference is not significant ($p > 0.2$).

Fig 4 shows only relief of pain after surgery. Less than half as many compensation patients reported complete relief of back or leg pain. Only four noncompensation patients were not relieved or were worse, but 13 compensation patients were in these categories. Consequently, sur-

1. Comparison of the 73 pairs of patients studied.

	Compensation Patients	Noncompensation Patients
Disc at surgery		
Extruded	38	38
Protruded	14	15
Normal	21	20
Myelogram		
Positive	20	20
Negative	21	20
Not done	32	33
Average duration of sciatica (months)	7	8
Average age (years)	40	42
Job classification		
Heavy	31	20
Medium	33	35
Light	9	18

gery completely failed to relieve pain about three times as often in compensation patients, and only one-third as many compensation patients reported complete relief of symptoms.

Discussion

These results agree with previous reports that, with respect to relief of pain and ability to return to work, treatment is less satisfactory in compensation patients than in patients with similar injuries but without compensation involved.[11-13] Considering pain relief only, there is a clear-cut difference between patients receiving compensation and those not. The relationship is probably mediated through several pathways involving psychological (accident neurosis), socioeconomic (secondary gain syndrome), and vocational (impairment of ability to compete for promotion) aspects.[14,15]

The decreased numbers returning to work among compensation patients may be partly or entirely related to the physical demands of their jobs, although the evidence presented here seems to the contrary. It was impossible to match the compensation patients with a cohort in the same job classification in all cases and although the difference is not significant ($p > 0.1$), there were fewer heavy workers and more light workers in the noncompensation group as a whole. In no case was a heavy worker paired with a light worker.

This question deserves further study. Nowadays it is difficult to find patients with back injuries doing heavy work who either hurt themselves off the job or had no compensation coverage. Another explanation for more compensation patients not working is that noncompensation patients might more easily change to lighter work, while employers of compensation patients want the patient either to return to his previous job or quit.

Unless it is realized that results from surgery are often poor in compensation patients, they may be subjected to repeated operations. Further surgery is rarely curative, however, and these patients often end up as tragically disabled failures of well-intentioned but misdirected therapy.[7] In fact, the total number of operations done on a compensation patient correlates negatively with return to work and, in one study, no patient having more than three low-back operations could be rehabilitated.[15] Therefore, without clear-cut evidence of organic disease, reoperation should be avoided in compensation

3. Return to work after lumbar disc surgery.

	Not Working	Working	
		Same Job	Lighter Work
Compensation patients	17	38	18
Noncompensation patients	0	59	14

4. Relief of pain after lumbar disc surgery.

Amount of Relief	Leg Pain		Back Pain	
	Compensation Patients	Noncompensation Patients	Compensation Patients	Noncompensation Patients
Complete	13	39	18	45
Partial	47	30	42	24
None or worse	13	4	13	4
Total	73	73	73	73

patients until psychological and vocational evaluation and counseling can be obtained. The Disabilitiy Prevention Commission recently formed by the Workmen's Compensation Board of the State of Oregon is an excellent example of such an approach.[16]

Initial reports on chemonucleolysis, treatment of ruptured discs by percutaneous intradiscal injection of the enzyme chymopapain, indicate this technique to be as effective as surgery with fewer complications.[17] The recent article on chemonucleolysis, "Treatment by Tenderizer" (*Time*, March 26, 1974) will likely generate more demand for this method of therapy. But the value of a new remedy is often overestimated at first, and comparisons with older methods of treatment are sometimes odious. Certainly the many factors influencing the results of treatment must be carefully considered. Selection of patients for treatment, the method of treatment chosen, and the manner in which it is done are some of the known factors.[6] Also, this study indicates that any evaluation of the treatment of low back pain must control the percentage of patients with compensation very carefully in order not to bias the results.

Summary

1. Relief of symptoms and return to work after lumbar disc surgery in 73 patients receiving compensation is compared to 73 matched control patients having identical findings, physical signs, myelographic abnormalities, sex and age, but without compensation.

2. Compensation patients reported one-third as many excellent results (no residual symptoms, working without impairment) and four times more poor results (not improved or worse).

3. One year after surgery all of the control patients were working, but 25% of the compensation patients were not.

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Audiovestibular findings with cervical spine trauma

Jerome Kosoy, MD; Arthur L. Glassman, MD

Patients with cervical spine trauma have many symptoms but display few objective abnormalities. The audiovestibular evaluation, on the other hand, reveals tangible abnormalities in about 50% of the cases. Otologic findings include tinnitus and high-frequency sensorineural loss. Electronystagmographic evaluation of the vestibular system demonstrates canal weakness and positional nystagmus. The mechanism of the positional nystagmus may be vascular, neurogenic, or neuromuscular in origin.

Ten cases with cervical spine trauma and abnormal audiovestibular abnormalities are discussed. An introduction to the pertinent aspects of electronystagmography is included.

Patients with cervical spine trauma frequently present symptoms out of proportion to objective findings. The audiovestibular evaluation, on the other hand, frequently reveals tangible abnormalities. The clinical picture is termed the cervical vertigo syndrome.[1]

Pathophysiology

The neck is important in the mechanisms of vertigo and nystagmus. Turning the neck normally induces eye movements and may even produce nystagmus. The inner ear is not responsible for this phenomenon, as neck torsion induces nystagmus in labyrinthectomized animals and in humans with absent labyrinthine function. Several mechanisms are operative in cervical vertigo and nystagmus.[1-6]

A vascular abnormality in the neck may result in vertigo. The subclavian steal syndrome is a well understood example of vertigo associated with a cervical vascular abnormality. In the cervical vertigo syndrome, however, the vertebral artery is responsible for the vertigo by virtue of insufficiency of its branches to the brain stem and inner ear. The etiology of the insufficiency ranges from intravascular occlusion by arteriosclerotic plaques to extravascular compression by osteophytic spurs or tense prevertebral and nuchal muscles. Neck torsion further diminishes the blood flow by either kinking the vessel or forcing an arthritic spur to impinge on the arterial lumen.[3,4]

The second mechanism operative in cervical vertigo is increased cervical sympathetic impulses. The increased autonomic activity induces a vasospasm which in turn produces brain stem and vestibular ischemia. While there is no good clinical evidence to support this neurogenic theory, there is experimental evidence that stimulation of the cervical sympathetics decreases cochlear function.[5-7]

A third mechanism of the cervical syndrome stems from proprioceptive discord of the nuchal muscles. The afferent proprioceptive impulses of the neck pass through the posterior cervical roots. Stimulation of the dorsal roots in animals produces eye movements and body dysequilibrium.[1,2] Unilateral sectioning of the upper cervical nerve roots or injection of local anesthetics into the deep nuchal muscles induces positional nystagmus.[1,2] The influence of the nuchal neuromuscular system on the cervical syndrome thus has good experimental support. The muscle spasm of neck trauma upsets the normal tonic flow of proprioceptive impulses and induces dysequilibrium.[6,8]

Diagnosis

The mosaic of symptoms includes vertigo, dysequilibrium, light-headedness, hearing loss, tinnitus, neck pain and stiffness, fatigue, and occasionally brain-stem symptoms.[9,10] Physical examination usually is unrevealing except for occasional tender cervical or nuchal muscles.[9] Roentgenograms may reveal preexisting cervical spine abnormalities such as osteoarthritis.

Audiometrics may reveal a high-frequency sensorineural loss, usually at 4,000 to 6,000 Hz. Results of vestibular examination, especially with electronystagmography, are abnormal in about 50% of cases.[11]

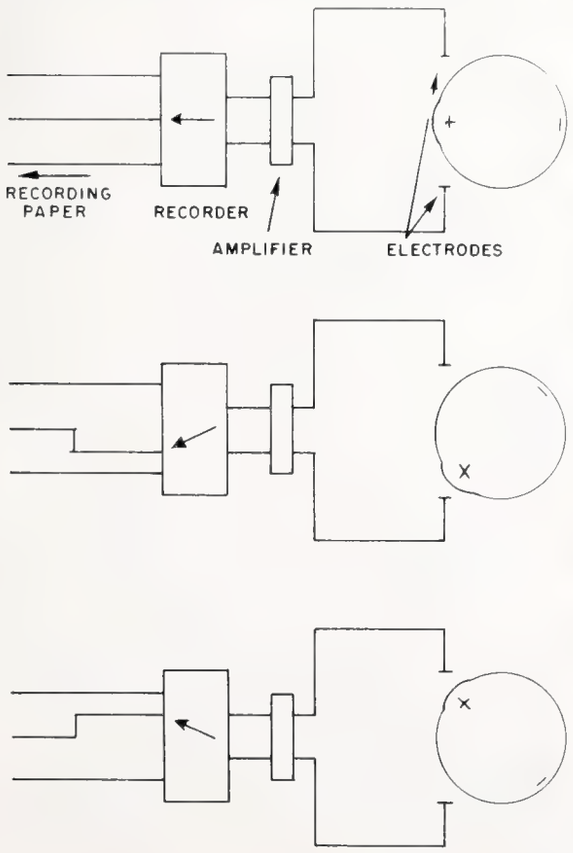
Electronystagmography

Electronystagmography is an electrical means of recording nystagmus. The theoretical basis is the corneoretinal potential. The cornea is positively charged with respect to the retina, transforming the eye into a rotating dipole (Fig 1). The potential, which shifts with eye movement, provides an uncomplicated method for electrical recording of nystagmus.[12,13]

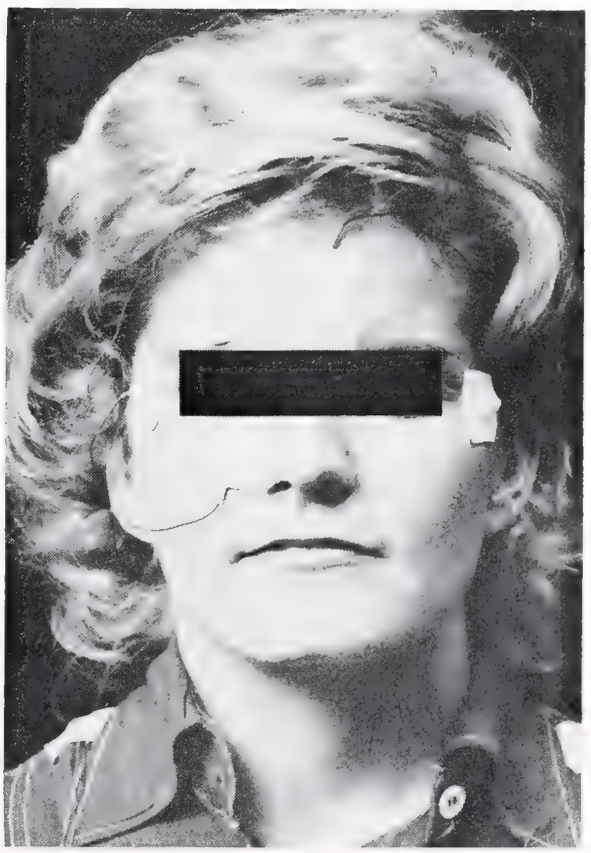
The instrument (Figs 2, 3) includes skin electrodes to detect the changes in the corneoretinal potential as the globe moves. The electrodes permit recording of the nystagmus with the eyes closed. The inhibitory influence of ocular fixation on vestibular nystagmus is thus eliminated (Fig 4). The instrument also includes a preamplifier to cancel out any interfering potentials, an amplifier, a pen recorder, and the final wave tracing or the nystagmogram. The quick component of the nystagmus jerk is reflected on the nystagmogram as the shorter and more vertical arm of the wave tracing. The slow component is the longer, more sloping line of the waveform (Fig 4).

The usual clinical situation for evalua-

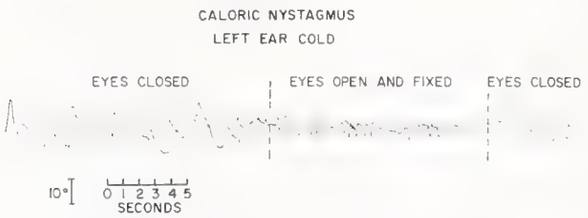
1. The eye acts as a rotating dipole. The potential of the eye shifts with movement of the globe.



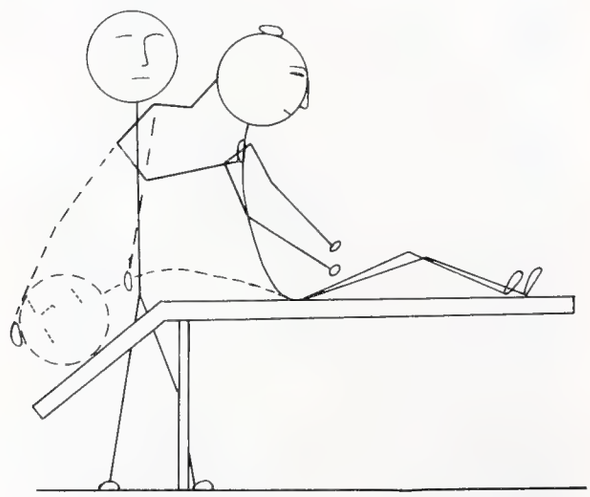
2. The ENG electrodes are in place around the eyes. The electrodes at the lateral canthi detect horizontal nystagmus while those above and below the eye detect vertical nystagmus. The fifth acts as a ground.



3. The technician is performing an aural irrigation to test for thermally induced nystagmus.



4. The sharply rising arm of the wave is the quick component of the nystagmus. The sloping line represents the slow component. Ocular fixation with the eyes open inhibits nystagmus of vestibular origin.



5. The Dix-Hallpike test for positional nystagmus requires the patient to move from a sitting to a supine position quickly. The head is turned to each side while held below the level of the table top.

tion of vertigo includes a battery of tests for spontaneous, gaze, positional, optokinetic, and bithermally induced nystagmus. The positional and bithermal tests are particularly relevant to the cervical syndrome. The bithermal test uses aural irrigation with water 7°C above and below body temperature. The sensitivity of bithermal testing for detecting labyrinthine hypofunction far exceeds that of the familiar ice water irrigation. The bithermal caloric tests also overcome any influence a latent spontaneous nystagmus might have on the response to the cold water test alone.[13]

Positional nystagmus is induced by changing the position of the head. Placing the head in a specific provocative position in space or twisting the neck to alter the relationship of the head to the body will produce positional nystagmus. The technician first moves the patient's head and body together to avoid neck and spine influences. The patient slowly moves through the six test positions: sitting, supine, head-hanging, prone, and right and left lateral.[13]

The Dix-Hallpike variation requires the patient to change his head and body position quickly. The technician grasps the patient's head and quickly moves him from a sitting to a supine position with the head hanging off of the end of the table and turned to one side (Fig 5). The maneuver is repeated to the opposite side and finally with the head hanging off of the end of the table but without twisting the neck.[14]

A nystagmic response that lags a few seconds in onset, beats in only one direction, lasts less than a minute, and fatigues with repetition of the test indicates a peripheral lesion. A direction-changing nystagmus of immediate onset that persists and is repeatable suggests a central nervous system disorder.[2]

A simple method to test for neck torsion nystagmus is to lay the patient on his side with his head, neck, and body moving as a unit. Any resultant nystagmus is "positional." The examiner must then rule out cervical influence. He holds the patient's head and asks him to roll over onto his back, inducing neck torsion. Any nystagmus thus generated is "neck torsion nystagmus."[2]

Case Studies

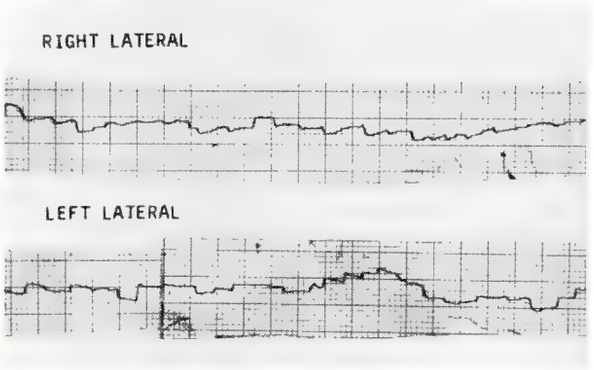
The histories of ten patients with cervical spine trauma and positive audiovestibular findings are presented. These patients represent about 10% of all electronystagmographic examinations during a nine-month period. Another 10% had a history of cervical spine trauma but no significant audiovestibular abnormalities. The case studies emphasize those points pertinent to the diagnostic aspects of the audiovestibular evaluation.

Case 1: A 46-year-old white woman had daily attacks of postural vertigo four months after sustaining blunt trauma to the head and neck. Physical examination was normal. Her electronystagmogram (ENG) demonstrated a directional preponderance to the right, spontaneous right-beating nystagmus, and bilateral neck torsion nystagmus.

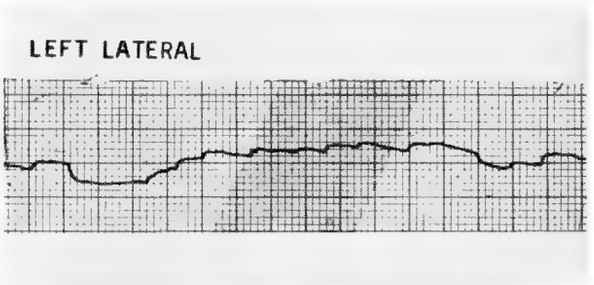
Case 2: A 50-year-old white woman had vertigo, tinnitus, otalgia, and right nuchal pain immediately following cholecystectomy. The anesthesiologist placed the neck in hyperextension for better laryngeal exposure during a difficult intubation. Roentgenograms confirmed a past history of cervical spine arthritis. Examination revealed tender right nuchal muscles. Her audiovestibular evaluation demonstrated a mild right sensorineural loss and a left-beating nystagmus in the head-hanging and right Dix-Hallpike positions.

Case 3: A 44-year-old black woman accidentally twisted her head quickly to the right during an unidentified physical activity. Whirling vertigo developed and was made worse when she moved her head. Results of physical examination were normal. An ENG one week later demonstrated left-beating nystagmus in the down-right Dix-Hallpike position.

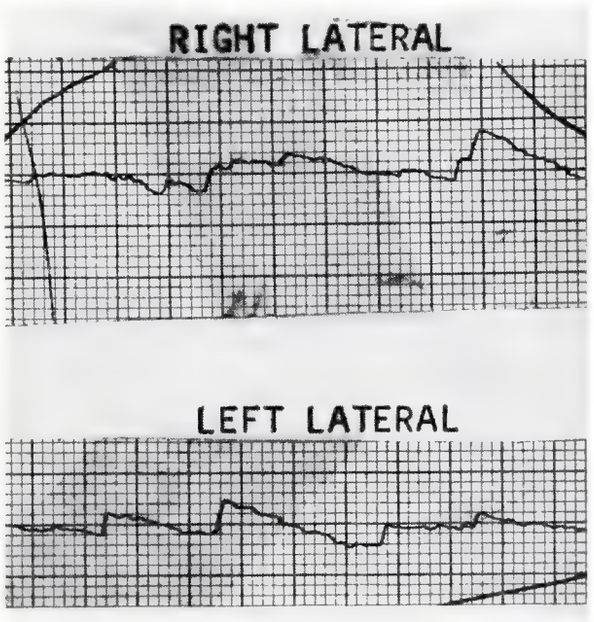
Case 4: A 36-year-old white man had low back pain after lifting heavy industrial equipment. He fell two days later, resulting in further injury and pain in the lumbar area. A physician manipulated his neck in an effort to treat his back problem. Subsequently, occipital headaches, intermittent blurring of vision, nuchal muscle spasm, dysarthria, and vertigo developed.



6. Case 4. This ENG demonstrates nystagmus with neck torsion to the right and to the left.



7. Case 6. This ENG of a 63-year-old man with a cervical spine strain demonstrates right-beating nystagmus in the left lateral position.



8. This ENG illustrates positional nystagmus. There is right-beating nystagmus in the right and left lateral positions.

Audiovestibular findings

A neurologist diagnosed brain stem disease. An ENG three years after the neck manipulation demonstrated direction-changing positional nystagmus, a characteristic of a central nervous system disorder (Fig 6).

Case 5: A 48-year-old white man fractured his cervical spine several years ago. He recovered with no apparent sequelae. He then became a welder and wore a welder's mask for most of the working day. He was asymptomatic for about 15 years, then one day he felt a sudden strain on his nuchal area after pulling his mask down into place. Positional vertigo, hearing loss, and tinnitus developed. Physical examination revealed nuchal muscular tenderness. Roentgenograms of the cervical spine demonstrated diffuse osteoarthritis. He had a bilateral high frequency sensorineural loss. The ENG revealed a directional preponderance to the right, and a right-beating nystagmus in the head-hanging position.

Case 6: A 63-year-old white man sprained his cervical spine in an automobile accident. He developed pain in the left side of the neck, tenderness, bilateral frontal headaches, paresthesias in the right hand, and true spinning vertigo associated with roaring tinnitus. His trapezius and sternomastoid muscles were spastic and tender. Radiographs demonstrated osteoarthritis in the cervical spine. Audiometry revealed a sensorineural loss consistent with his age. His ENG demonstrated a right-beating nystagmus in the left lateral position (Fig 7).

9. Audiovestibular abnormalities in ten patients.

	No. Patients
Otologic	
Tinnitus	5
High frequency loss	4
Dead cochlea	1
ENG:	
Unilateral weakness	2
Directional preponderance	4
Spontaneous nystagmus	2
Positional nystagmus	10

Case 7: A 44-year-old white woman suffered neck hyperextension in an automobile accident; tinnitus and positional vertigo developed. Evaluation six months later revealed spontaneous nystagmus to the right. Radiographs were normal. Her audiogram demonstrated a mild bilateral sensorineural loss at 4,000 Hz. Her electroencephalogram showed (EEG) abnormal activity overlying the left temporal area. Her ENG revealed a unilateral canal weakness (left side).

Case 8: A 34-year-old white woman had a ten-year history of headaches and vertigo occurring almost weekly since a "whiplash" injury. Her symptoms were exacerbated by moving her head. Examination revealed tender right nuchal muscle and some resistance to moving her head to the right. A neurologist attributed her symptoms to "tension." Roentgenograms of the cervical spine and an audiogram were normal. Her ENG demonstrated a directional preponderance to the right, and spontaneous nystagmus to the right which became more intense in the right lateral position.

Case 9: A 21-year-old white man sustained head and neck trauma in an automobile accident. He had a longitudinal fracture of the right temporal bone with a transient facial palsy on the right side, vertigo with the head twisted to the right, and tinnitus on the right. Physical examination revealed right hemotympanum. He had a totally deaf right ear. The ENG demonstrated a right unilateral canal weakness and a directional preponderance to the left.

Case 10: A 26-year-old white woman had severe vertigo after an automobile accident in which she was thrown forward suddenly. She had a grossly ataxic gait. Examination revealed tender nuchal muscles and left upper extremity weakness. She was left-handed. Her ENG demonstrated right-beating nystagmus in the right and left lateral positions (Fig 8).

Discussion

The audiovestibular examination demonstrates abnormalities in about 50%[11] of patients with cervical spine trauma. Fig 9

summarizes the clinical findings. The most frequent otologic findings are tinnitus and high frequency sensorineural loss. The most common ENG abnormalities are positional nystagmus, directional preponderance, and canal weakness. The ENG in case 4 confirmed the clinical impression of central nervous system disease.

Cases 2, 5 and 6, representing about one-third of the present series, had associated cervical osteoarthritis. It is not unreasonable to assume this disease contributed to the clinical picture.

The prognosis[15] is generally favorable. An abnormal ENG soon after trauma is of no prognostic value. An ENG abnormality that persists after 6 to 12 weeks indicates a less favorable prognosis. Cases 4 and 8 are examples of persistent symptomatology and abnormal ENG findings as long as three and ten years after injury. A normal ENG soon after injury seems to indicate a favorable prognosis, but the number of such cases is too small for statistical verification.

Electronystagmography offers the clinician the advantage of contributing to the diagnosis and prognosis of the cervical vertigo syndrome. The ENG also has the advantage of detecting nystagmus with the patient's eyes closed. In addition, the permanent recording permits documentation for teaching, publication, and comparison purposes.[12,13]

The main disadvantage of the ENG is the special equipment and space required. Another disadvantage is the ability of many patients to inhibit nystagmus voluntarily. This may be overcome by asking the subject to perform simple mental tasks, such as counting backwards, to keep alert.[12,13]

A successfully performed ENG offers an in-depth analysis of the parameters of nystagmus. Latent nystagmus may be one of the few objective findings in a dizzy patient.

Acknowledgment

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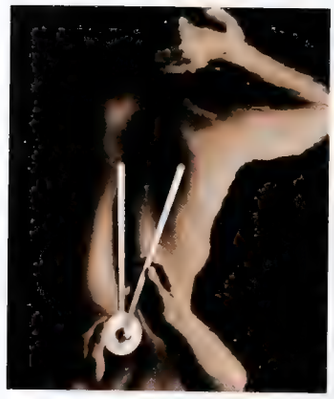

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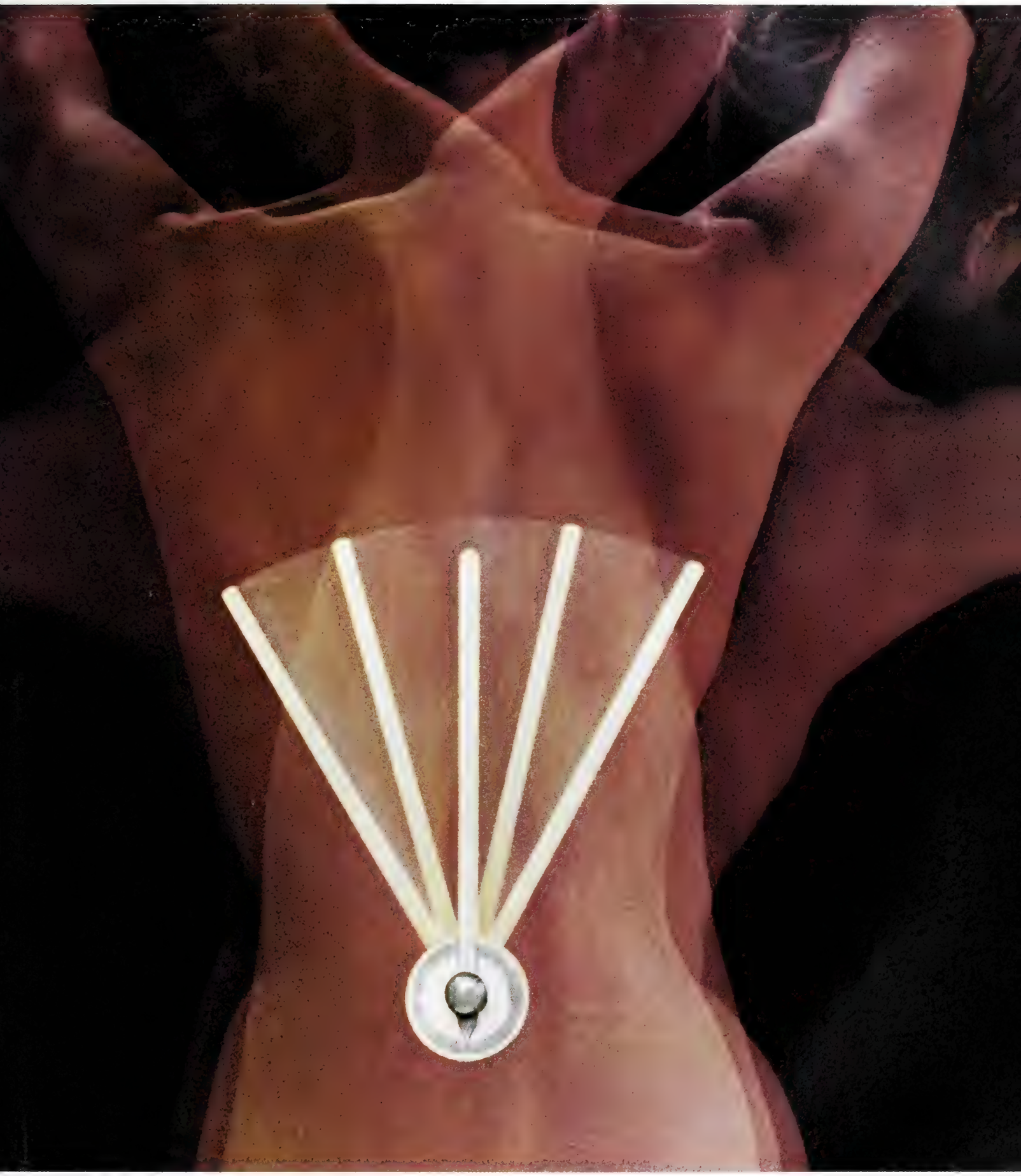

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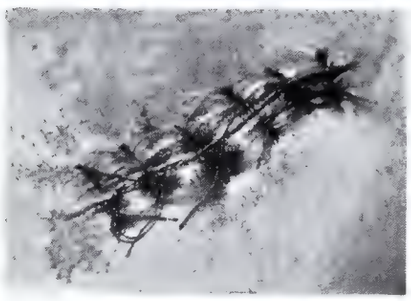

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Uses and abuses of thyroid function tests

Lloyd N. Gilliland, Jr., MD; Robert W. Collison, MD

We have noted that, many times, physicians order thyroid function studies which frequently give meaningless results, either because the studies are not properly selected or because the patient is not (or cannot be) properly prepared for the selected tests. Often the test results may be conflicting and useless for therapeutic consideration. This not only confuses the physician, but frequently explains the lack of correlation between the clinical findings and laboratory results. This often leads to needless expense for the patient.

This outline explains the uses and limitations of thyroid function tests and suggests a sensible approach to evaluating thyroid function in any given situation.

Currently Utilized Thyroid Function Tests

I. Tests Related to the Accumulation of ^{131}I by the Thyroid and Its Distribution Within the Gland

A. The 24-Hour ^{131}I Uptake Test: This test reflects the avidity with which the thyroid traps and extracts iodine from the circulation. Following the oral tracer dose of ^{131}I, the amount trapped by the thyroid is measured in 24 hours. Normal values range from 6-30%. This range is lower than previous levels cited, and may reflect increasing dietary iodine in this area.

B. The 6-Hour ^{131}I Uptake Test: This test is similar to the 24-hour uptake study except the uptake is measured in 6 hours rather than in 24 hours. Severely thyrotoxic patients will occasionally have a normal or low 24-hour uptake value. This merely reflects the extreme hyperactivity of the gland with accumulated ^{131}I incorporated into thyroxine and already released by the time the 24-hour measurement is made. In these cases, the 6-hour uptake value would be higher than the 24-hour uptake value.

C. The Thyroid Scan: The scan will show a diffuse hyperactivity in exophthalmic goiter and a patchy pattern in toxic nodular goiter. It does allow one to classify thyroid nodules as "hot" or "cold," depending on whether the nodule does or does not pick up ^{131}I. The thyroid scan provides information regarding the size, shape, and position of the gland; it also may determine thyroid tissue in ectopic or metastatic sites. Nodules larger than 5 mm in size may be visualized by this method.

D. Factors Which May Influence Results in ^{131}I Uptake Studies[1]:

1. Factors that increase uptake:
   a. Factors reflecting increased hormonal synthesis:
      (1) Hyperthyroidism
      (2) Response to glandular hormonal depletion
         (a) Recovery from thyroid suppression
         (b) Recovery from subacute thyroiditis
         (c) Withdrawal of antithyroid drugs
      (3) Excessive hormonal losses
         (a) Nephrotic syndrome
         (b) Chronic diarrheal states
         (c) Soybean ingestion
   b. Factors not reflecting increased hormonal synthesis:
      (1) Iodine deficiency
         (a) Dietary
         (b) Excessive loss (dehalogenase deficiency)
      (2) Synthesis and release of abnormal iodinated products
         Hashimoto's thyroiditis

2. Factors that decrease uptake:
   a. Factors reflecting decreased hormonal synthesis:
      (1) Primary hypofunction
         (a) Primary myxedema
         (b) Chronic thyroiditis
         (c) Subacute thyroiditis
         (d) Hormonal biosynthetic defects
         (e) Antithyroid agents
      (2) Secondary hypofunction
         (a) Pituitary insufficiency
         (b) Pituitary suppression
   b. Factors not reflecting decreased hormonal synthesis:
      (1) Increased availability of iodine
         (a) Exogenous iodine
         (b) Renal or cardiac failure
      (2) Increased hormonal release
         Very severe hyperfunction (severe toxic goiter)
      (3) Certain cases of acute thyroiditis

II. Tests Related to the Concentration of Circulating Thyroid Hormones and Their Binding Proteins

A. Protein Bound Iodine (PBI): The PBI has been one of the most frequently performed thyroid function tests used in recent years. The results of this *in vitro* test must be evaluated with the knowledge that it is an indirect measurement of total thyroxine, and iodine contamination in the laboratory or within the patient will lead to erroneous conclusions. The normal PBI range is from 4-8 μg/100 ml.

The following outline represents factors which may influence the PBI[1]:

1. Factors that decrease the PBI level:
   a. Thyroid dysfunction
      (1) Primary hypothyroidism
      (2) Pituitary hypothyroidism
      (3) Suppression of thyroid function by T_3 (triiodothyronine)
   b. Decrease in hormonal binding
      (1) Decreased thyroxine binding by thyroxine binding globulin (TBG)
         (a) Androgenic hormone
         (b) Masculinizing disorders
         (c) Idiopathic decrease in TBG
         (d) Excess of glucocorticoids
         (e) Acromegaly
         (f) Dilantin
      (2) Decreased thyroxine binding prealbumin
         (a) Salicylates
         (b) Some cases of nonspecific illness
   c. Chemical influence on the test
      (1) Mercurials
      (2) Gold therapy
2. Factors that increase the PBI level:
   a. Thyroid dysfunction
      (1) Hyperthyroidism
      (2) Abnormal iodoprotein release
         (a) Hashimoto's disease
         (b) Subacute thyroiditis
         (c) Acute thyroiditis
      (3) Suppression or replacement therapy with thyroxine-containing drugs
      (4) Use of d-thyroxine (Choloxin)
   b. Increase in hormonal binding (increased TBG)
      (1) Pregnancy
      (2) Feminizing tumors
      (3) Estrogenic compounds including contraceptive drugs
      (4) Acute hepatocellular disease
      (5) Acute intermittent porphyria
      (6) Idiopathic increase in TBG
   c. Exogenous iodine
      (1) Topical use of iodine
      (2) Iodine-containing medicinals
      (3) Radiographic procedures using iodine compounds

(4) ^{131}I studies or therapy

3. Reliability of PBI Values: As a guide to the reliability of the PBI value where the patient has had contact with iodine or iodine compounds or other drugs affecting the test, Fig 1 shows how long certain agents can affect the PBI results. These time intervals are approximations and are subject to considerable variation. If contamination of the patient with iodine is present at the time a PBI is run, results will be falsely elevated. A normal or elevated result could mask a euthyroid or hypothyroid state.

B. Butanol Extractable Iodine Test (BEI): The BEI test generally parallels the PBI except that inorganic iodine and abnormal iodoproteins do not cause an increase in the BEI whereas they do increase the PBI. The normal values for this test are 3.2-6.4 μg/100 ml.

C. T_4 by Column: This *in vitro* thyroid function test was devised to eliminate contamination by inorganic iodine and nonhormonal organic iodine. However, it does not eliminate contamination from iodoalphionic acid (Priodax), iopanoic acid (Telepaque), and iothiouracil (Itrumil). Normal values are 2.9-6.4 μg/100 ml.

D. T_4 by Isotope (Total T_4; TT_4): T_4 by isotope is an *in vitro* test run on the blood serum. It does require radioisotope laboratory facilities. The results represent the total thyroxine present. The normal values are 4.5-11.5 μg/100 ml, utilizing a competitive protein-binding (Murphy-Pattee) T_4 assay method. Most of the problems with iodine contamination of the patient can be avoided by the use of this test. It is, however, influenced by changes in TBG.

The following factors may alter TT_4 values[2]:

1. Factors causing an increase:
   a. Hyperthyroidism
   b. Increase in TBG or TBG binding capacity
      (1) Hereditary
      (2) Pregnancy
      (3) Estrogenic compounds, including contraceptive pills
      (4) Acute intermittent porphyria
      (5) Infectious hepatitis
      (6) Trilafon
2. Factors causing a decrease:
   a. Hypothyroidism
   b. Decrease in TBG or TBG binding capacity
      (1) Hereditary
      (2) Androgenic hormones
      (3) Nephrotic syndrome
      (4) Corticosteroids
      (5) Active acromegaly
      (6) Dilantin
      (7) Salicylates (large doses)

1. Time lag during which certain agents can affect PBI results.

Agent	Time Lag	Agent	Time Lag	Agent	Time Lag
^{131}I	2 months	Gold therapy	2 months	Priodax	6 months
Antithyroid drugs	8 days	Iodothiouracil	4 days	Salicylates	8 days
Cholegrafin	4 months	Lipiodol	1 year	Telepaque	3 months
Corticosteroids	8 days	Lugol's solution	1 month	Teridax	30 years
d-Thyroxine	2 weeks	Mercurials	3 days	Topical I_2	1 month
Diodoquin	10 days	Orabilex	1 month	Ukoron	3 months
Diodrast	6 months	Pantopaque	1 year		
Estrogens	8 days	Phenylbutazone	14 days		

c. Triiodothyronine (T_3) (endogenous or exogenous)

d. Antithyroid drugs

E. Normalized Serum Thyroxine (TT_4N)[3]: This test procedure is basically a TT_4 method but, in addition, uses the patient's serum to supply TBG. It has been called a dual competitive protein binding analysis, since not only is there competition between patient T_4 and test T_4, but also competition between patient TBG and test TBG. It is an attempt to provide one test procedure that would replace the usually measured TT_4 and RT_3U.

F. Resin T_3 Uptake Test (RT_3U): The resin T_3 uptake test is an *in vitro* test using patient serum, radioactive T_3, and a resin or some other material that will bind T_3 not bound to TBG. This test is a measure of the unsaturated binding capacity of TBG. The normal values of the RT_3U are 25-36%. It, like the TT_4, is not affected by iodine but is affected by alterations of TBG levels. These factors are:[2]

1. Factors causing an increase:
   a. Hyperthyroidism
   b. Decrease in TBG or TBG binding capacity
      (1) Hereditary
      (2) Androgenic hormones
      (3) Nephrotic syndrome
      (4) Corticosteroids
      (5) Active acromegaly
      (6) Dilantin
      (7) Salicylates (large doses)
   c. Antithyroid drugs
2. Factors causing a decrease:
   a. Hypothyroidism
   b. Increase in TBG or TBG binding capacity
      (1) Hereditary
      (2) Pregnancy
      (3) Estrogens or contraceptive pills
      (4) Acute intermittent porphyria
      (5) Infectious hepatitis
      (6) Trilafon
   c. Triiodothyronine (endogenous or exogenous)

G. Thyroxine-Resin T_3 Index: It may be noted by reviewing the previous two outlines that factors which alter the TBG or TBG binding capacity cause an opposite effect on the results of the TT_4 as compared with the RT_3U. By multiplying the percent of the RT_3U by the micrograms of the TT_4, a thyroxine-resin T_3 index is obtained. This has also been called the T_7. This index has been used as an indirect indication of free thyroxine levels. This index allows one to quickly ascertain the patient's thyrometabolic status without having to correlate the results of the RT_3U and TT_4 separately. The normal range of the TT_4-RT_3U is 1.13-4.14. An important exception to the value of this index, as far as gauging metabolic activity, is in the case of T_3 thyrotoxicosis, or where exogenous T_3 has been given.

H. TBG (Thyroxine Binding Globulin): An indirect measurement of the TBG may be obtained by electrophoretic methods using radioactive-labeled thyroxine. When abnormal TBG concentrations are suggested by previous test results, the TBG measurement may be quite helpful. The normal value for the TBG is approximately 20 ± 4 μg/100 ml.

I. Thyroid-Binding Prealbumin (TBPA): The TBPA measurement may also be made, but from a practical standpoint, the exact significance of the result, as far as thyroid function is concerned, is not very well understood.

J. Free Thyroxine Test (FT_4): Thyroxine (T_4) is 99.95% protein bound. This portion is thought to be metabolically inactive. The remaining .05% is the metabolically active fraction. Measurement of the FT_4 is not affected by changes in TBG. This makes this test of value in determining the thyroid status of pregnant women, in patients receiving sex hormones or medications which affect the TBG (such as diphenylhydantoin and salicylates), and also in patients having congenitally abnormal levels of TBG. This *in vitro* test has a normal value of 1-2.3 ng/100 ml.

Increased values of the FT_4 are seen in patients with certain acute and chronic disease states but who are clinically euthyroid. In such cases, the TT_4 is usually normal.[4,5] In T_3 thyrotoxicosis, the FT_4 levels are usually normal.

K. Serum Triiodothyronine test (T_3)[6]: T_3 levels are helpful in the diagnosis of conditions where changes in the T_4-T_3 ratio are present. Both the T_3 and T_4 levels must be known. Examples of this situation are in (a) T_3 thyrotoxicosis; (b) euthyroid states where the presence of low TT_4, FT_4, and RT_3U are found, and may be seen occasionally in patients with limited thyroid tissue such as after a subtotal thyroidectomy or after treatment with ^{131}I; and (c) adaptation of the thyroid to iodine deficiency.

Elevated T_3 levels also have been noted as a premonitory manifestation in thyrotoxicosis. A positive correlation has been noted between long-acting thyroid stimulator levels (LATS) and the serum T_3. Also, where TT_4 levels are over 40μg/100 ml, the T_3 level is usually increased. Hypothyroid individuals who have become euthyroid by taking T_3 orally will have T_3 levels two to three times higher than the normal euthyroid population. The normal quantitative T_3 levels range between 100 and 300 ng/100 ml, but normal values are quite dependent on the method of T_3 determination utilized.

III. Tests Related to the Pituitary Gland in Thyroid Function

A. TSH Assay[8]: It has long been thought that thyrotropin (TSH) from the pituitary is a major determinant of thyroid secretion and, in turn, circulating thyroxine regulates TSH secretion. The hypothalamus also influences TSH secretion by thyrotropin-releasing hormone (TRH).

Only recently has it been possible to measure TSH quantitatively by radioimmunoassay. Since it is now possible, the measurement of TSH in plasma is highly useful in the diagnosis and management of several disorders of thyroid secretion. The normal TSH values are variable depending on test antibody source. One group of investigators has determined a normal range of 2.0-15.2 microunits/ml.[7]

The first major value of TSH assay is the recognition and differential diagnosis of hypothyroidism. TSH values are nearly always elevated in primary hypothyroidism, and this should be considered one of the most reliable tests for this condition. TSH is not influenced by altered TBG. The only nonthyroidal agents known to inhibit TSH secretions are pyrogens and glucosteroids. There has been evidence to suggest that younger hypothyroid patients tend to have higher TSH levels than older patients. The TSH level is also valuable in managing the hypothyroid patient if the physician is in doubt as to the adequacy or faithfulness of replacement therapy. When thyroid therapy is instituted, the plasma TSH levels regularly fall. The rate of fall

depends on the type and dosage of therapy.

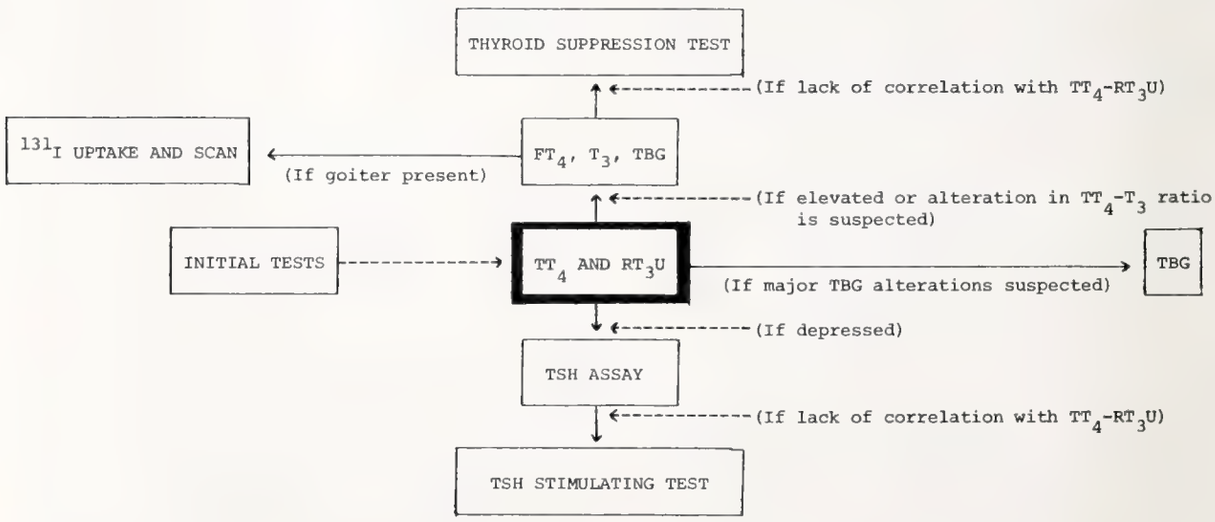
An elevated TSH level does not always indicate clinically significant thyroid deficiency. Elevated TSH levels have been found in euthyroid patients with chronic thyroiditis, iodine deficiency goiter, iodide-induced goiter, and individuals who have received radioactive iodine. It is often elevated in chronic thyroiditis, but it usually is not elevated in multinodular goiter. This fact may be helpful in differential diagnosis.

A second major value of the TSH assay is in the differential diagnosis of hypothyroidism. In contrast to the elevated TSH levels found in patients with primary hypothyroidism, the TSH levels are low or undetectable in secondary (pituitary) hypothyroidism.

In the past such differentiation required the administration of TSH for one to three days, and repeated measurement of thyroxine or thyroidal uptake which was time-consuming and expensive. The TSH determination is not of value in the diagnosis of hyperthyroidism.

B. TSH Stimulation Test [4,9]: The TSH stimulation test is useful in the diagnosis and differential diagnosis of hypothyroidism. It depends on the principle that intramuscu-

2. Schematic of thyroid testing procedures.



lar injection of bovine TSH causes increased uptake of ^{131}I by the thyroid if subnormal thyroid function is caused by hypothalamic or anterior pituitary disease, but causes little or no response if primary disease involves the thyroid. This test can also be utilized in patients receiving replacement therapy in whom the diagnosis of hypothyroidism is questioned.

Testing can be performed by using a single dose of 10 U bovine TSH, or by using three-day stimulation. The single-dose TSH test can differentiate euthyroid patients misdiagnosed as hypothyroid from true hypothyroidism, but will not adequately differentiate primary hypothyroidism from secondary hypothyroidism. The three-day TSH test is necessary for the latter determination, although now it is apparent that the best differentiation of primary hypothyroidism from secondary hypothyroidism is obtained by a quantitative TSH determination. Normal response is an increase of ^{131}I uptake by 20 percentage points, or doubling of baseline rate.

C. Thyroid Suppression Test[10]: Thyroid hormone, if given in sufficient quantities, normally causes a suppression of endogenous thyroid function by causing a decrease in the secretion of TSH and resultant decreased thyroid hormone synthesis. This is the basis for the thyroid suppression test.

In exophthalmic goiter, excessive quantities of endogenous or exogenous hormones fail to suppress thyroid function. In this disease usually there is present long-acting thyroid stimulating hormone (LATS) which is formed by the lymphocytes. LATS levels are not influenced by endogenous or exogenous thyroid hormones. In some cases, however, there may be no LATS present, but apparently a type of thyroid-stimulating hormone from the pituitary is present which is not influenced by the thyroid hormone.

An abnormal suppression test occurs in thyrotoxicosis of endogenous origin, regardless of underlying disease. However, a positive test in the absence of thyrotoxicosis usually does indicate latent exophthalmic goiter.

Even though the thyrotoxicosis of exophthalmic goiter is relieved by treatment, the abnormal suppression test may persist, for years. It also has been reported that a small percentage of patients with nontoxic goiter, Hashimoto's thyroiditis, and iodide goiter may have abnormal results of suppression tests.

The only added value of the thyroid suppression test over other thyroid function tests might be in the differential diagnosis of a suspected latent exophthalmic goiter in the absence of thyroid toxicity, and in cases of suspected T_3 thyrotoxicosis.

The test is conducted usually by first obtaining a baseline 24-hour ^{131}I uptake. Then 75 mcg of T_3 are given daily for eight days; then a repeat ^{131}I uptake is done. A normal response would be a reduction of ^{131}I uptake to 20% or less of the dose, or to one-half or less of the initial value. Failure of the uptake to decline below 35% indicates an abnormal response. There are many variations in how this test may be conducted.

Suggested Method of Procedure in Testing Thyroid Function

One of the most valuable estimations of thyroid function is obtained by a careful history and physical examination. In years past, the basal metabolism rate was the chief objective tool used to determine the metabolic state. If measured under ideal

conditions, it is still helpful occasionally. However, our primary purpose is the discussion of a routine to follow in the various tests which have been described.

In our opinion, as a screening test or where thyroid dysfunction is suspected the most useful procedure is to obtain values for T_4 by isotope (TT_4) and T_3 resin uptake (RT_3U). A TT_4-RT_3U index can then be quickly calculated. If all values are within a normal range and there are no clinical incompatibilities, no further thyroid tests are indicated. By using this combination, for the most part, all problems related to iodine contamination are eliminated. Furthermore, major errors resulting from altered TBG are corrected. We do not think the PBI nor ^{131}I uptake should be used as an initial test because of the long lists of influencing factors which could lead to an erroneous conclusion.

If the TT_4-RT_3U index indicates a hypothyroid state, it is thought that a TSH assay should be run to differentiate primary hypothyroidism from a secondary (pituitary) hypothyroidism. If for any reason the TSH assay fails to correlate, a TSH stimulating test should be run.

If the TT_4-RT_3U index indicates major alterations in TBG, as a double check it is advisable to determine the TBG capacity. If these correlate well and the tests indicate euthyroidism, no further tests are indicated. If the TT_4-RT_3U index is borderline or equivocal, it is necessary to secure values for T_3, FT_4, and TBG capacities. This combination of tests should help in evaluation.

If the TT_4RT_3U index indicates hyperthyroidism, or if on clinical grounds hyperthyroidism is suspected, in addition to previous tests, it would also seem advisable to determine FT_4, T_3, and TBG capacities. If there are any equivocal results at this point, a thyroid suppression test should be done.

In patients with diffuse or nodular goiters, the process of laboratory evaluation is essentially the same, except that after the preceding routine has been completed, it might be helpful to secure a ^{131}I uptake and scan. The scan helps locate "hot" or "cold" nodules which may or may not have surgical implications.

If an individual who had previously been found to be hypothyroid was treated with desiccated thyroid or l-thyroxine, and if the individual clinically seems to be euthyroid, it is advisable to perform the TT_4 and RT_3U tests to check the status of therapy. If one can be certain that there are no iodine contaminants or TBG abnormalities, a PBI also could be used for the same purpose. It is not possible to determine accurately by blood assays whether an individual may be euthyroid or hypothyroid if he is on T_3 therapy.

Fig 2 summarizes our suggested method of procedure in evaluating thyroid function.

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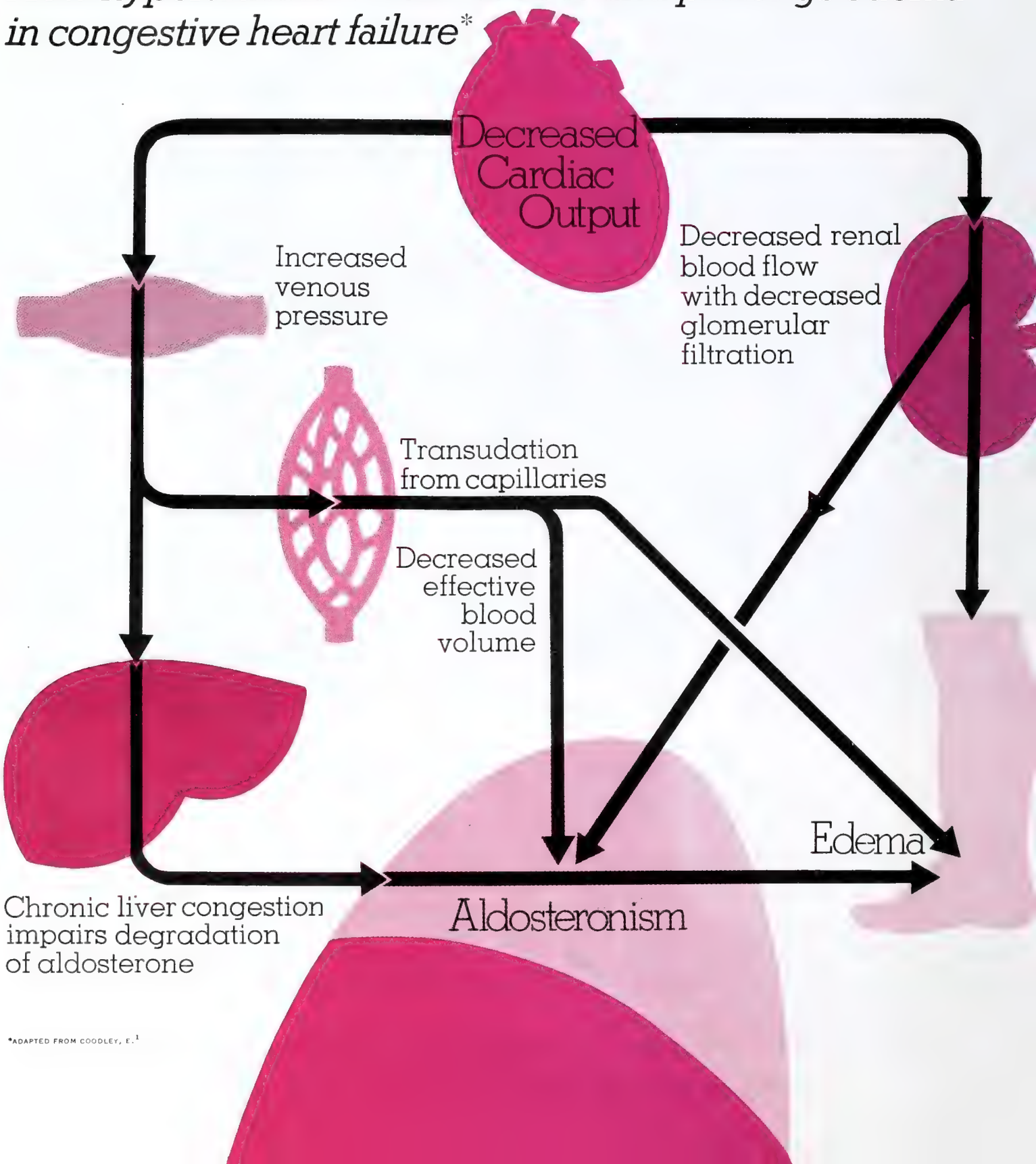

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2. As the basic daily diuretic with an "add-on" alternate-day-diuretic ("A.D.D." schedule)

- Can be administered daily as basic therapy with the additional agent (furosemide or ethacrynic acid) given every second or third day.
- Aldactone plus "A.D.D." schedule minimizes potassium deficiency and potentiates effect of "add-on" diuretic.[2]
- Avoids acute volume depletion and aldosterone rebound.[2]

3. As a daily diuretic in combination with a daily dose of a thiazide

- Permits daily additive diuretic effect while maintaining potassium balance.

Indications—Essential hypertension; edema or ascites of congestive heart failure, cirrhosis of the liver and the nephrotic syndrome; idiopathic edema. Some patients with malignant effusions may benefit from Aldactone (spironolactone), particularly when given with a thiazide diuretic.

Contraindications—Acute renal insufficiency, rapidly progressing impairment of renal function, anuria and hyperkalemia.

Warnings—Potassium supplementation may cause hyperkalemia and is not indicated unless a glucocorticoid is also given. Discontinue potassium supplementation if hyperkalemia develops. **Usage of any drug in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the mother and fetus.**

Precautions—Patients should be checked carefully since electrolyte imbalance may occur. Although usually insignificant, hyperkalemia may be serious when renal impairment exists; deaths have occurred. Hyponatremia, manifested by dryness of the mouth, thirst, lethargy and drowsiness, together with a low serum sodium may be caused or aggravated, especially when Aldactone is combined with other diuretics. Elevation of BUN may occur, especially when pretreatment hyperazotemia exists. Mild acidosis may occur. Reduce the dosage of other antihypertensive drugs, particularly the ganglionic blocking agents, by at least 50 percent when adding Aldactone since it may potentiate their action.

Adverse Reactions—Drowsiness, lethargy, headache, diarrhea and other gastrointestinal symptoms, maculopapular or erythematous cutaneous eruptions, urticaria, mental confusion, drug fever, ataxia, gynecomastia, inability to achieve or maintain erection, mild androgenic effects, including hirsutism, irregular menses and deepening voice. Adverse reactions are infrequent and usually reversible.

Dosage and Administration—For **essential hypertension** in **adults** the daily dosage is 50 to 100 mg. in divided doses. Aldactone may be combined with a thiazide diuretic if necessary. Continue treatment for two weeks or longer since an adequate response may not occur sooner. Adjust subsequent dosage according to response of patient.

For edema, ascites or **effusions** in **adults** initial daily dosage is 100 mg. in divided doses. Continue medication for at least five days to determine diuretic response; add a thiazide or organic mercurial if adequate diuretic response has not occurred. Aldactone dosage should not be changed when other therapy is added. A daily dosage of Aldactone considerably greater than 75 mg. may be given if necessary.

A glucocorticoid, such as 15 to 20 mg. of prednisone daily, may be desirable for patients with extremely resistant edema which does not respond adequately to Aldactone and a conventional diuretic. Observe the usual precautions applicable to glucocorticoid therapy; supplemental potassium will usually be necessary. Such patients frequently have an associated hyponatremia—restriction of fluid intake to 1 liter per day or administration of mannitol or urea may be necessary (these measures are contraindicated in patients with uremia or severely impaired renal function). Mannitol is contraindicated in patients with congestive heart failure, and urea is contraindicated with a history or signs of hepatic coma unless the patient is receiving antibiotics orally to "sterilize" the gastrointestinal tract.

Glucocorticoids should probably be given first to patients with nephrosis since Aldactone, although useful for diuresis, will not directly affect the basic pathologic process.

For **children** the daily dosage should provide 1.5 mg. of Aldactone per pound of body weight.

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The Role of the Detail Man

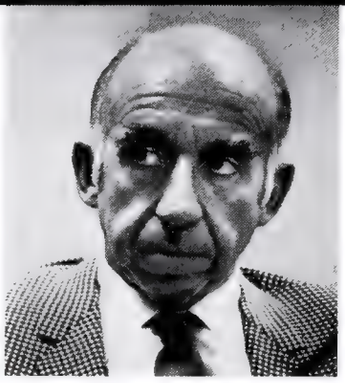
Opinion & Dialogue

Dr. Willard Gobbell
Family Physician
Encino, California

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Jeremiah Stamler
Chairman,
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealing with health problems in this country there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihood on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in this

He a Source of Information?

Yes, with certain reservations. ne average sales representative as a great fund of information bout the drug products he is re- ponsible for. He is usually able to nswer most questions fully and telligently. He can also supply prints of articles that contain a eat deal of information. Here, o, I exercise some caution. I usu- ly accept most of the statements nd opinions that I find in the apers and studies which come om the larger teaching facilities. goes without saying that a physi- an should also rely on other ources for his information on harmacology.

raining of Sales Representatives

Ideally, a candidate for the sition as a sales representative a pharmaceutical company ould be a graduate pharmacist ho has a questioning mind. I don't ink this is possible in every case, nd so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as up-dated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

---

apacity they are indeed useful; articularly in the fact that they isseminate broadly based educa- onal material and serve not just s "pushers" of their drugs.

ne Other Side of the Coin

Obviously, the pharmaceuti- al companies are not producing all iis material as a labor of love— ey are in the business of selling roducts for profit. In this regard ne ambitious and improperly moti- ated sales representative can xert a negative influence on the racticing physician, both by pre- enting a one-sided picture of his roduct, and by encouraging the ractitioner to depend too heavily n drugs for his total therapy. In nese ways, the salesman has often istorted objective reality and ndermined his potential role as an ducator.

he Industry Responsibility

Since the detail man must be n information resource as well as representative of his particular harmaceutical company, he hould be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.,* the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical Manufacturers Association
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Spectrum of acute glomerulonephritis

Joseph C. Dougherty, MD; George A. Bannayan, MD; Michael J. Sweeney, MD

The differential diagnosis of acute glomerulonephritis (AGN) is easy or difficult in proportion to our familiarity with the spectrum of the disease. In describing the spectrum of a disease, two aspects may be considered. The first is the number of diseases which may present with similar clinical findings. The second is the diverse clinical presentations of patients with the same disease. Both of these aspects play a role in our recognition of acute glomerulonephritis. Often when AGN is mentioned it is equated with acute poststreptococcal glomerulonephritis (PSGN) and thought of as a childhood disease. The purpose of this paper is to review the usual manifestations of PSGN in childhood,[1] present some of the more atypical presentations, and to discuss the differential diagnosis of AGN, especially in the adult.

Acute Glomerulonephritis in Childhood

AGN is an inflammatory disease of the glomerulus with leukocytic infiltration and cellular proliferation.[2] This reaction is evoked by an antigen-antibody reaction, the nature of which will be discussed subsequently. The glomerular injury leads to the clinical manifestations of hematuria, fluid retention, hypertension, and varying degrees of renal insufficiency. In childhood, PSGN is the most common form of AGN. No single clinical finding or laboratory test absolutely validates the diagnosis of PSGN. The diagnosis must be made on clinical grounds, ie, the presenting and subsequent constellation of clinical signs and symptoms, laboratory findings, and clinical course simply precludes any other diagnosis.

In northern portions of the United States, PSGN is seen most frequently in the winter and early spring following streptococcal pharyngitis. In southern portions of the country it is most frequently seen in the summer and early fall following streptococcal pyoderma. Thus an essential element in the diagnosis is a history of "sore throat" within the preceding one to three weeks or evidence of recent (and often still present) pyoderma. While PSGN can occur at virtually any age, the peak incidence is between four and eight years of age. Some studies report a 2:1 greater incidence in males, but other studies, particularly those with large numbers of cases following pyoderma, report no difference in sex incidence.

The most common reason parents bring their child to a physician is edema, which is generally mild and located in the pretibial and periorbital areas. Massive edema, commonly observed in the nephrotic syndrome, is unusual. If present, it is generally associated with cardiac decompensation or ingestion of large amounts of salt and water. Fluid retention produces hemodilution and contributes to the development of hypertension. Blood pressures in the range of 140 to 200 mm Hg systolic and 90 to 140 mm Hg diastolic are found in three-quarters of all patients. Acute hypertension may lead to some of the less common manifestations. Evidences of heart failure occur with dyspnea, orthopnea, arrhythmias, cardiomegaly, venous engorgement and hepatomegaly. These signs and symptoms are due to salt and water retention and not to intrinsic myocardial disease. Cardiac output is generally normal or slightly elevated.

In some 10% of patients, a moderate degree of encephalopathy develops. Symptoms include severe headache, blurred vision, drowsiness and occasionally coma and convulsions. Severe hy-

pertension is invariably found in children with central nervous system manifestations. The pathogenesis of this complication is thought to be due to salt and water retention and induced vasospasm. These produce increased intracranial pressure and cerebral edema. Severe hypertensive retinopathy is unusual.

Some patients with cerebral manifestations will have nausea and vomiting as part of their symptom complex. These symptoms also occur in patients without encephalopathy. A quarter of patients with PSGN will present with gastrointestinal complaints. These include severe abdominal pain, nausea and vomiting. The clinical picture may suggest acute appendicitis.

Salt and water retention are an integral part of AGN. In some patients renal impairment may be severe enough to produce oliguria or anuria. Some 5 to 10% of patients may present with these complaints. In most cases these patients will also be edematous and hypertensive.

No single laboratory test absolutely validates the diagnosis of PSGN. Studies which aid in diagnosis include urinalysis, blood studies indicating azotemia, serological evidence of recent streptococcal infection, and studies of complement.

Proteinuria is regularly found and rarely may be in the nephrotic range. In these patients, hypoalbuminemia and hypercholesterolemia may also be present, indicating a nephrotic component to the nephritis. Gross hematuria is not unusual and may be the presenting complaint. In some patients the urine is "Coke"-colored or smoky. In almost all cases microscopic hematuria will be found. The sediment should be examined carefully for red blood cell (RBC) casts.[3] These are fragile elements and may not be found if the urine is allowed to stand or is otherwise mishandled. RBC casts are not pathognomonic of PSGN, but also occur in other diseases which cause glomerular inflammation. The differential diagnosis of hematuria should include focal glomerulitis or benign recurrent hematuria. In this condition the hematuria develops concurrently with the acute infection, and is not associated with fluid retention and hypertension. A small number of cases of AGN with normal urinalysis have been reported.[4]

Hemodilution secondary to fluid retention can result in a mild anemia and a modest decrease in serum protein concentration. Elevations of blood urea nitrogen and creatinine levels due to the fall in glomerular filtration rate are present. Serological evidence of a preceding streptococcal infection should be sought. The antistreptolysin-O titer is the most commonly available test. A twofold elevation in the titer during the period of observation is helpful. Patients treated with penicillin for pharyngitis may not have any elevation in their antistreptolysin-O titer despite developing PSGN. The antistreptolysin-O titer is less frequently elevated in patients with pyoderma. Serum complement, usually measured as C'_3, is consistently low in patients with AGN.

When examined at autopsy, the kidneys are symmetrically enlarged, pallid, and the cut surface bulges due to interstitial edema. There is generalized diffuse and uniform involvement of the glomeruli. The glomeruli are swollen, hypercellular, and appear slightly lobulated. Mesangial and endothelial cell proliferation and polymorphonuclear leukocyte infiltration make up the increased cells. Occasionally, small epithelial crescents are seen in Bowman's space. The capillary lumens are compromised by the proliferating

cells. Fluorescent antibody studies reveal a granular pattern along the capillary walls, which correspond to the electron-dense deposits referred to as "humps" that are seen by electron microscopy. These are on the epithelial side of the glomerular capillary basement membrane. The rest of the kidney shows little change, but interstitial edema, collections of inflammatory cells, and red blood cells in the tubular lumens also may be seen.

Acute Glomerulonephritis in Adults

Poststreptococcal glomerulonephritis also occurs in adults.[5] In this group it is generally thought to be rare and have a high fatality rate. The supposed infrequency can be attributed to several factors, one of which is the nonspecificity of the signs and symptoms. While the clinical features of edema, hypertension, proteinuria, and hematuria, when present in a child, are most commonly due to AGN, the same constellation of findings in an adult is often attributed to some other disease. The initial diagnostic impression is usually that of congestive heart failure or infection. Thus the findings are attributed to the more common degenerative diseases. These include diabetes, arteriosclerosis, or hypertension. Hypertension as a result of AGN is less common in adults. Seen most frequently are edema and circulatory congestion. The nonspecific complaints of anorexia, nausea, vomiting, and myalgias are often present. Proteinuria and hematuria also may be attributed to other disease processes. The finding of RBC casts would turn the clinician's attention to glomerulitis, but as mentioned previously these formed elements can be easily missed on routine urinalysis.

Laboratory confirmation of PSGN in the adult may not be easy. An elevated antistreptolysin-O titer may not be found. Results of erythrocyte sedimentation rate, complement and serum albumin are variable. Because of the nonspecificity of the clinical and laboratory findings the correct diagnosis may not be made antemortem. The clinician must maintain a high index of suspicion and make use of renal biopsy when appropriate.

Another factor to be considered in the adult is the fact that streptococcal infections are not the only causes of glomerulonephritis. Immune responses to other infections and other generalized diseases such as lupus erythematosus or thrombotic thrombocytopenic purpura may be present. Any of the diseases listed in Fig 1 can produce an acute glomerulonephritis. The possibility of AGN is often overlooked until falling urine volume and rising BUN and creatinine values draw attention to the kidney. Renal biopsy remains the most useful study for making the diagnosis and aiding in estimating the prognosis.

The prognosis of AGN remains a controversial subject. Consideration of the immunopathogenesis and mechanisms of glomerular injury is useful in developing a concept of who might recover. The pathogenesis has been extensively reviewed by Merrill.[6] There are two immunological types of glomerulonephritis. The first is immune complex disease; the second is anti-basement membrane antibody disease. In immune complex disease soluble antigen-antibody complexes lodge in the glomerulus. The complement cascade is activated, releasing factors which attract polymorphonuclear leukocytes to the area. In attempts to remove and destroy the entrapped complexes, the leukocytes

1. Etiology of acute glomerulonephritis.

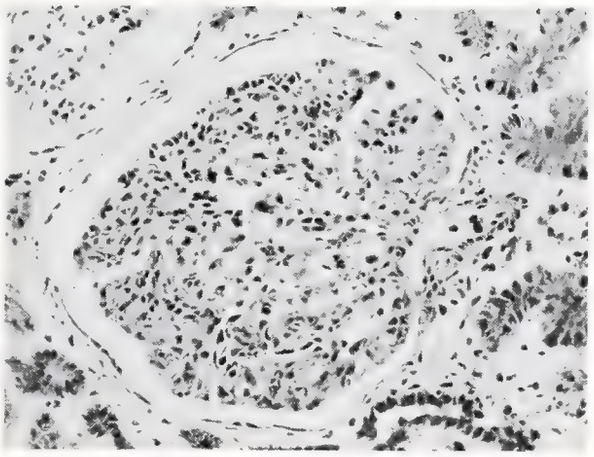
1. Beta-hemolytic streptococcal infection
2. Subacute bacterial endocarditis
3. Pneumococcal lobar pneumonia
4. Staphylococcal infections
5. Viral infections
6. Associated with systemic diseases

release a variety of factors which injure the glomerular capillary wall and allow it to leak serum proteins and erythrocytes. In addition, proliferation of glomerular capillary endothelial and mesangial cells occurs (Fig 2).

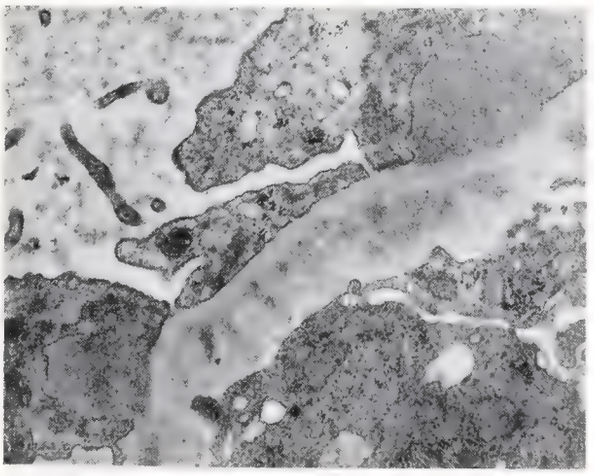
Most cases of PSGN result from immune complex disease (Fig 3). Prognosis in these cases could be related to the duration that insoluble complexes are produced. Since they develop at about the point of antigen-antibody equivalence, one would expect that if the antigenic stimulus were brief, then the injury would be acute and recovery would occur. PSGN in childhood would be an example of such a situation. Clinical recovery is said to occur in the vast majority, with chronic nephritis developing in 1 to 3%. Other studies have led to different conclusions depending on whether clinical or histological criteria are used. Histological abnormalities may persist long after the urinalysis has returned to normal. Studies in adults are more controversial. Because of the variety of stimuli which may cause AGN, one is not sure that different authors are always comparing the same diseases. This plus the fact that not all cases are diagnosed may make the prognosis seem less favorable in adults.

Hinglais et al found that all patients with only mesangial proliferation on histologic examination recovered.[7] In patients with exudative glomerulonephritis 23 of 29 recovered. In many of these patients evidence of a preceding streptococcal infection was present.

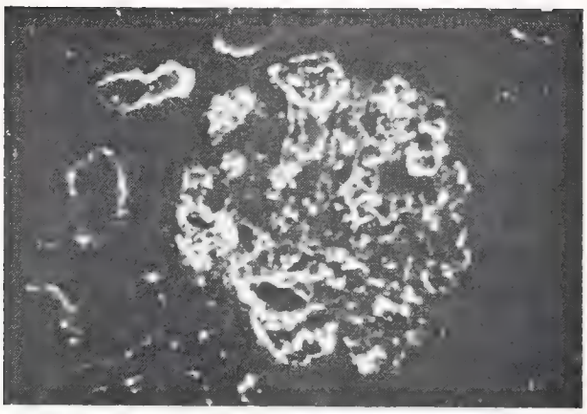
Such a favorable outcome in PSGN has not been supported by the observations of Baldwin et al.[8] They carried out long-term observations in 126 patients and were able to follow 60 for 2 to 15 years. Within three years, terminal uremia devel-



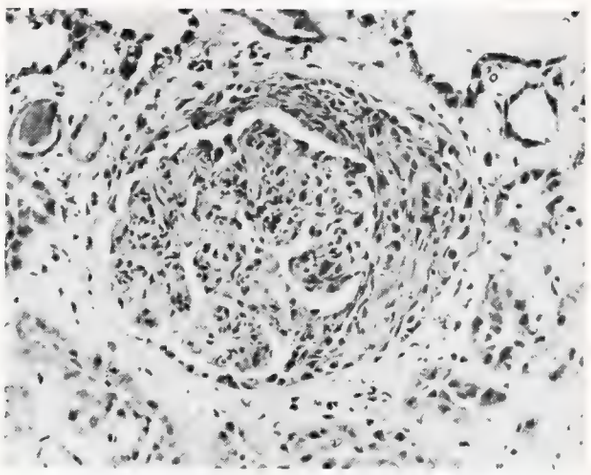
2. Acute poststreptococcal glomerulonephritis. Swollen hypercellular glomerulus due mainly to mesangial and endothelial cell proliferation. A number of polymorphonuclear cells are present. The tufts show accentuated lobulation and reduction of the capillary lumen size. Hematoxylin and eosin, X 70.



3. Acute poststreptococcal glomerulonephritis. Immunofluorescence study showing a granular pattern. The fluorescent granules represent the antibody-antigen complexes. Anti-C'_3 complement.



4. Acute poststreptococcal glomerulonephritis. Electron microscopy. Beneath the epithelial cell is a dome-shaped hump, composed of an electron-dense deposit which represents an antibody antigen complex and corresponds to the granules seen on immunofluorescence. Uranyl acetate and lead citrate. X 6,400.



5. Rapidly progressive glomerulonephritis. The glomerulus is hypercellular due to endothelial and mesangial cell proliferation. The glomerulus is compressed and distorted by proliferating epithelial cells, taking the form of a crescent and partially filling Bowman's space. Hematoxylin and eosin, X 75.

oped in 10%. On long-term follow-up proteinuria, hypertension or reduction in filtration rate was seen in one-half of those followed for the extended period. The reasons for the disparity in the observations of various authors remain to be clarified.

Rapidly Progressive Glomerulonephritis

All clinicians are aware that in some cases of acute glomerulonephritis renal failure develops rapidly and death occurs within weeks or months. Various names have been used to describe this form of nephritis. They include subacute glomerulonephritis, crescenteric or extracapillary glomerulonephritis, and rapidly progressive glomerulonephritis (RPGN).

RPGN is a disease of young adults. There is a preponderance of men, usually in the third and fourth decades of life.[9] In many instances the disease has an acute onset with oliguria, hypertension, and rapidly rising BUN and creatinine values. In some cases the onset is more insidious with weight gain and peripheral edema being the presenting complaints. In this group renal failure develops rapidly, hypertension is common, and oliguria is a terminal event. Proteinuria is present and may be severe enough to produce a nephrotic syndrome.

RPGN is a disease of multiple etiologies. Goodpasture's syndrome, progressive Henoch-Schönlein purpura, the microscopic form of periarteritis nodosa, nonstreptococcal AGN as well as occasional cases of PSGN may all present with the clinical picture described. Laboratory studies indicate the presence of and severity of the renal lesion. Serological evidence of a preceding streptococcal infection may be present. Proteinuria, hema-

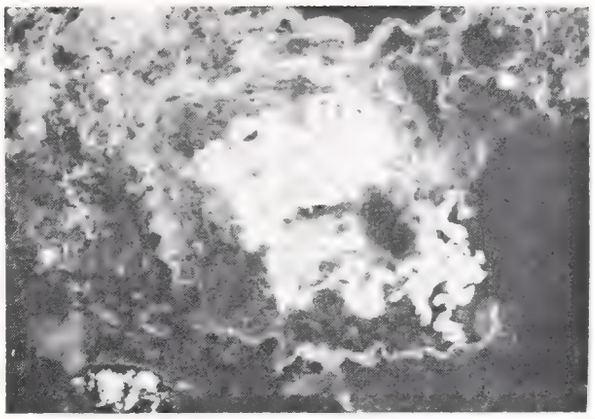
turia and RCB casts are found. Serum complement levels may not be depressed unless RPGN is due to PSGN.

The pathologic findings in RPGN are remarkably uniform irrespective of the etiology.[10] On gross inspection the kidneys are enlarged, smooth, and may have petechial hemorrhages. There is widespread glomerular involvement with proliferative changes in the glomerular tufts often accompanied by areas of necrosis, adhesions to Bowman's capsule, and scarring. The most striking feature, however, is the presence of epithelial crescents, formed by the cells lining Bowman's capsule, which may completely fill the capsular space and virtually obliterate the capillary tufts (Fig 5). Fluorescent antibody studies usually reveal a linear pattern of immunoglobulins along the glomerular basement membrane. This is the characteristic pattern seen in association with anti-glomerular basement membrane antibodies (Fig 6). The rest of the kidney may show interstitial edema, collection of inflammatory cells, and tubular atrophy and drop-out.

The prognosis for recovery in rapidly progressive glomerulonephritis is uniformly poor. This might be expected since the injury is usually produced by antibodies directed against the glomerular basement membrane. This should produce progressive disease. Almost all patients become functionally anephric and must be supported by hemodialysis. Of the few reported survivors, most have had RPGN secondary to streptococcal disease.[11]

Therapy

Since PSGN has been shown to be an immunologically mediated disease, one would expect that its course could be influenced by immunosuppressive therapy. Unfortunately, this is not the case. Neither corticosteroids nor the immunosuppressive drugs azothioprine (Imuran) and cyclophosphamide (Cytoxan) have been shown to increase the rate of recovery or the probability of complete healing. Therapy must be directed at specific complications. Streptococcal infection in the patient and family members should be treated with penicillin. Salt and water should be restricted to control the hypertension and edema. A diet containing 1 gm of sodium chloride (17 mEq) is usually effective. When marked edema and hypertension are present, potent oral diuretics should be added to the regimen. Dietary protein need not be restricted unless the patient is oliguric or uremic. In these cases a diet containing 0.5 gm of high biological value protein per kg body weight is appropriate. High protein diets do not improve the rate of renal healing. By increasing the load of metabolic waste products to be excreted they hasten the development of uremic symptoms. Therapy for other forms of acute glomerulonephritis follows the same general principles; treat-



6. Rapidly progressive glomerulonephritis. Immunofluorescence study showing a linear pattern. Anti-IgG.

ment of the underlying disease and control of specific complications.

Therapy for RPGN remains controversial. In many instances corticosteroid and immunosuppressive therapy have not been effective.[12] They are, however, almost standard therapy. Anticoagulants have been reported to be useful adjuncts to treatment.[9] Dialysis is effective in maintaining life. There is a high incidence of recurrent disease after renal transplantation despite immunosuppressive therapy; thus, this form of therapy is less attractive.

Summary

Acute glomerulonephritis is a disease of multiple etiologies. In childhood acute poststreptococcal glomerulonephritis is the most common type. PSGN also occurs in the adult, but in this age group other causes are more common. Nephritis may be overlooked because of the nonspecificity of the signs and symptoms. Also, there is no one laboratory test to confirm the diagnosis. The renal biopsy remains the most useful tool for determining the type of nephritis present and helping to establish the prognosis. In most instances acute nephritis due to trapping of antigen-antibody complexes in the glomerulus is a reversible disease. When the antigenic stimulus for antibody production persists, such as in lupus nephritis, the disease may be progressive. In various types of RPGN the antibody is directed against the glomerular basement membrane. In these instances renal failure develops within a short period of time.

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Public hearing elicits views on role of acupuncture in Texas

Acupuncture constitutes the practice of medicine and falls within the purview of the Medical Practice Act of Texas . . . acupuncture therapy merits controlled study as an experimental modality . . . acupuncture treatment results must be recorded and published for peer review . . . sensationalism of acupuncture has produced false expectations by the public . . . acupuncture, performed by untrained and unqualified persons, may produce severe complications . . . acupuncture cannot be learned in a weekend course.

These are just a few of the views put forth in a public hearing conducted by the Texas State Board of Medical Examiners Aug 16 in Austin. How has the board come to undertake the task to define precisely the role and parameters of this ancient Chinese medical art in Texas medicine?

Westerners view Chinese culture

The culture of the People's Republic of China, for many years a dim memory for some Americans and a mystery to most, caught the fascination of the Western public early in this decade when the unlikely diplomats of the American Ping-Pong team toured the vast Asian mainland country.

American curiosity about life in this ancient land heightened with the United States' recognition of the People's Republic of China in 1972, its subsequent acceptance into the United Nations, and the much publicized visit to mainland China by an American head of state, former President Richard Nixon, and a large entourage of news media representatives.

Americans eagerly consumed the multitude of forthcoming reports describing the Chinese way of life and traditions, among which was the practice of acupuncture.

Growing interest and acceptance of the technique by the public in this country has led to the proliferation of acupuncture clinics. Much like the promise of an old-time elixir, this enthusiastic embrace of acupuncture has caused the medical community to undertake studies in an attempt to determine acupuncture's place in American medicine.

Policy statements issued

A progression of policy statements by medical organizations has emphasized the need for further study and evaluation of acupuncture.

In June 1972, the American Society of Anesthesiologists issued a statement on acupuncture which expressed concern over the premature application to American patients of acupuncture for relief of pain during surgery. The statement charged that a "potentially valuable technique which has been developed over thousands of years in China is being hastily applied with little thought to safeguards or hazards."

Attention to the acupuncture debate has crescendoed this year.

In February, the American Medical Association summarized its position on acupuncture, classifying the technique as an experimental procedure only to be performed by or under the supervision of a licensed physician. The AMA held that all the regulations pertaining to the conduct of an experiment on a human being should be observed in the use of acupuncture. These include securing informed consent, telling the patient of alternative and available methods of treatment, permitting the patient to withdraw from therapy at any time he wishes, and finally, reporting the

results of acupuncture treatment in reputable medical journals for peer review.

The AMA also expressed the view that a short course in acupuncture does not qualify a person to perform the procedure on patients for the treatment of illness.

In April, the Texas State Board of Medical Examiners ruled that unless the Texas Legislature enacted legislation otherwise defining acupuncture, the board must necessarily regard it as the practice of medicine inasmuch as it purports to be a healing art.

The board stated, "Any person performing acupuncture who is not a licensed physician, therefore, would be practicing medicine without a license and would be in violation of the Medical Practice Act of Texas." The statement added that a physician may authorize one under his direct control and personal supervision to perform acupuncture, but the physician so supervising must be skilled in acupuncture in order to properly evaluate, direct, and instruct the assistant performing the acupuncture procedure.

In May, the Texas Medical Association adopted a policy on acupuncture which supported the ruling of the Board of Medical Examiners. In addition, the TMA Board of Councilors expressed the opinion that acupuncture be considered strictly as an investigational procedure at this time, to be performed only in medical centers and teaching hospitals having committees on human research.

Concerned with the protection of the public from exploitation, the board stated that it "recognizes the need for and desires to encourage further research in the techniques, mechanisms of action, and uses of acupuncture." The TMA councilors recommended that scientific evaluation of the modality be conducted only by or under the direct supervision of a qualified investigator licensed to practice medicine and surgery in Texas and who, by the virtue of his knowledge, training and experience, is adequately skilled in this experimental field.

Examiners to consider legalities

Thus, the Texas State Board of Medical Examiners is currently faced with determining the legalities of acupuncture therapy within the state of Texas. The purpose of the August hearing, as stated by Dr. J. G. Rodarte, board president, was to hear invited guests knowledgeable in the subject and to receive additional statements from persons wishing to express their views on acupuncture.

Anesthesiologist testifies

A major contribution to the hearing was the presentation by Dr. M. T. Jenkins, McDermott professor and chairman, Department of Anesthesiology, The University of Texas Southwestern Medical School at Dallas. Dr. Jenkins was a member of the AMA delegation which visited the People's Republic of China in July. He offered the board the following observations of acupuncture as perceived in his visits to medical facilities of seven cities—Peking, Shenyang, Dairen, Tientsin, Shanghai, Hangchou, and Kuangchou. In 21 days, the 12 American physicians visited 26 institutions including 11 Western-type hospitals, six Western medical schools, four hospitals of traditional Chinese medicine, four medical schools of traditional Chinese medicine, and one research institute.

Dr. Jenkins participated in the anesthesia

The Chinese are conducting experimentation in needle placement. One physician in Shanghai purports that one point will produce analgesia over the entire body.

by monitoring six patients scheduled for thoracotomies under acupuncture analgesia, three patients for thyroidectomies, two having semilunar cartilages of the knee removed, and one patient for laparotomy for excision of an ovarian cyst.

In rating the success of acupuncture, the American physicians relied upon a grading system developed by the American Acupuncture Anesthesia Study Group which had visited the People's Republic of China earlier this year. Of the procedures, two of the thyroidectomies, the two knee cartilage removals, and two of the thoracotomies were considered as grade 1, little or no pain and minimal changes in vital signs. Two of the thoracotomies and the laparotomy were considered as grade 2, where the patients exhibited slight pain, showed moderate changes in vital signs, and needed local and intravenous agents. One thoracotomy was considered as grade 3, because acupuncture was associated with periods of moderate to severe pain, marked changes in vital signs, and required large amounts of opiates. None were classified as grade 4, failure of acupuncture, requiring conversion to conventional anesthetic methods. In compiling the total operations which the 12 physicians saw performed under acupuncture, 60-70% were classified as grades 1 or 2. This estimate, according to Dr. Jenkins, agreed with the report from the American Acupuncture Anesthesia Study Group which closely monitored 48 operations under acupuncture.

In acupuncture outpatient clinics, many patients were being treated for a great variety of diseases and abnormal physical states. Treatment was directed to such entities as paralysis from acute anterior poliomyelitis, cerebral thrombosis, rheumatism, sciatic pain, headache, facial tics, chronic appendicitis, thyroid disease, deafness, mutism, nephritis, bronchitis, and enuresis. The treatment records were not available to the American physicians who were told that the patient keeps his own record. According to one Chinese physician, "We don't need the records since we keep up with patients so closely." However, in one acupuncture outpatient clinic, open six and one-half days a week, 500 patients were treated each day. By contrast, Dr. Jenkins said that hospital records were meticulously kept and readily available for inspection by the Americans.

Because many people are willing to submit to acupuncture treatments and pay high fees for them, the public could be easily exploited by untrained acupuncturists.

Chinese still researching acupuncture

An unusual clinical study was one being conducted by the Department of Traditional Medicine (herbal and acupuncture) in a Western-type hospital. The study involved an attempt to treat an acute condition within the abdomen with herbs and acupuncture rather than with surgical intervention.

The three areas of clinical research brought to the attention of the visiting American physicians throughout their visit to Chinese medical institutions were acupuncture, bronchitis, and acute conditions of the abdomen. A little-known fact is that acupuncture for surgical analgesia was introduced in China only in 1954.

The Chinese are also conducting experimentation in needle placement. Dr. Jenkins saw no consistency in the placement of needles during his visit. In fact, one Chinese physician in Shanghai purported that one point will produce analgesia over the entire body.

In stressing his conviction that the United States should be cautious in adopting acupuncture, Dr. Jenkins quoted from the summarizing statement of the AMA delegation: "Acupuncture as a method of reducing pain perception during operations is used in some 15% of Chinese major operations and presents features which should be further studied, since it may reduce some complications of surgical operations. Its widespread use in Western surgery seems highly unlikely. Acupunc-

ture as a treatment for a wide range of common medical complaints has been in use for over 3,000 years. It has not produced very satisfactory results in the past, we judge, since the Chinese have continually looked for new methods, and there is no scientific evidence to show that anything has changed in the present."

Traditional medicine in China (herb therapy and acupuncture) is practiced by the barefoot doctor (official Chinese title) as there is a great shortage of medical doctors. Traditional medicine is the only primary therapy available for the rural masses who constitute 80% of the population. This care is without cost to the patient. Consequently, the AMA delegation recognized the elastic boundaries for use of acupuncture as an initial approach to therapy in China. However, the delegation does not regard acupuncture therapy in the United States in the same light. The delegation stated that acupuncture must be regarded as experimental medicine, legal in the United States only in investigational settings in the hands of licensed physicians, dentists, and research scientists. Most importantly, the delegation stressed that improperly used acupuncture should not be permitted to become a new kind of quackery used for exploitation of the public in the Western world.

A large number of acupuncture complications have already been reported in the American literature. These include hepatitis, peritonitis from penetration of abdominal viscus, pneumothorax from puncture of the lung, cardiac tamponade, meningitis, penetration of the middle ear, penetration of the globe of the eye, penetration of the pregnant uterus, cardiac arrhythmias with electro-acupuncture, and less serious complications such as needle breakage, damage to nerves and arteries, and local infection. Dr. Jenkins noted that it is possible that an undiagnosed malignancy may progress to an incurable state while a patient temporizes with acupuncture.

Dr. Jenkins told the medical examiners

A large number of acupuncture complications have already been reported in American literature. It is even possible that an undiagnosed malignancy may progress to an incurable state while a patient temporizes with acupuncture.

that it is the uniform opinion of the AMA delegation that acupuncture analgesia merits controlled study. He said there is a need for continuing efforts to understand the nature of the acupuncture effect. In addition, it is the conviction of the delegation that acupuncture therapy should be regarded as the practice of medicine, admissible only in qualified investigational settings.

Dr. Jenkins cited a recent contribution to the *Journal of the American Medical Association* (June 17, 1974: pp 1544-1551) by Dr. John J. Bonica in which several suggestions were made for conducting controlled clinical surveys for patients treated with acupuncture. (Dr. Bonica visited China in June 1973 as a member of the American delegation organized by the Committee on Scholarly Communication with the People's Republic of China.) In the article, Dr. Bonica proposed that a controlled clinical survey should fulfill the following requisites:

1) A definite diagnosis of the disorder derived from a complete history and examination done by a licensed physician prior to instituting acupuncture therapy. 2) An informed consent from the patient who is told that the procedure is still experimental and is informed of the possible side effects, complications, advantages, and disadvantages. 3) Accurate recording of the acupuncture technique used for each treatment, including the sites and number of acupuncture needles, the type of stimulation, and the number of treatments. 4) The use of uniform criteria for evaluating the results by the patients and by the physician. 5) Followup evaluation of the results at intervals as is appropriate for each disease state. 6) A submission of the record of each patient to a central agency for analysis of the data.

Proposed acupuncture plan

Synthesizing the various observations and recommendations, Dr. Jenkins proposed a plan for Texas medicine for the medical examiners' consideration. He suggested the following be recognized and/or instituted:
1) Acupuncture constitutes the practice of medicine and falls within the purview of the Medical Practice Act of Texas. 2) Any person performing acupuncture must be a licensed physician or dentist who may not authorize an employee or a nonlicensed individual to practice acupuncture except under his direct control, direction, and personal supervision. To supervise properly, he himself must be skilled in acupuncture to properly direct and instruct his assistant. 3) Any licensed physician or dentist who wishes to employ acupuncture in his clinical practice or clinical investigation must present his plans in writing to the Committee on Research in Humans of the hospital in which he practices or of the county medical society in which he practices, whichever has established a committee. (This would require some county medical societies or hospitals to establish a Committee on Research in Humans.) 4) The licensed physician or dentist must be a member of an Acupuncture Study Group to which he submits copies of his required records for review, collation, and inventory or statistical analysis. (Dr. Jenkins expounded on this by saying if a physician or dentist is accepted by a study group, he should be a full-fledged member of the group, meet with it in analysis of collected information, and should have access to all records accumulated by the study group.) 5) Study groups in the state of Texas should require a uniform protocol, a special record-keeping system, and should have access to a computer center for the analysis of data. 6) Study groups should be established in each of the Texas medical schools, and the state should be divided into geographical regions so that licensed physicians and dentists interested in the study of acupuncture would know to which study group they should apply for membership. 7) Departments in Texas medical schools which have interest in basic investigation of acupuncture should be encouraged to participate in the study groups and should be supported in their endeavors to seek grants for basic investigations in the modalities of acupuncture.

Acupuncture as a method of reducing pain perception during operations is used in approximately 15% of Chinese major operations.

Dr. Derrick's presentation

Another major presentation before the Board of Medical Examiners was made by Dr. William S. Derrick, chairman, Anesthesiology Department, MD Anderson Hospital, Houston.
In introducing Dr. Derrick, Dr. Robert Moreton of the University Health Science Center at Houston observed that acupuncture should be considered the practice of medicine "for the patient's sake." He emphasized the need to protect the public from exploitation, pointing out that acupuncture in China is practiced without charge to the patient. He urged further study of the procedure in order to determine its proper place in American medicine.
Dr. Derrick discussed the use of acupuncture in the pain clinic of MD Anderson, emphasizing that the clinic's acupuncture experience is limited to its use for the relief of pain.
Dr. Derrick opened his presentation with a film of the first patient who received acupuncture in the clinic. The patient, a 57-year-old woman referred to MD Anderson

by her personal physician two years ago, was suffering from severe pain in her right lower leg and foot. Acupuncture was proposed to the patient and proper informed consent procedures conducted. Two Chinese-American physicians on the clinic's staff, who were experienced in the technique, conducted the treatments. The first treatment produced remarkable results as witnessed by the viewers of the film. After approximately 20-30 minutes, the woman could no longer feel any pain and was able to walk without the aid of crutches. She subsequently received several additional treatments, Dr. Derrick said, and today walks unassisted, experiencing only residual pain.

According to Dr. Derrick, the outcome far exceeded any expectations of the staff, and he qualified the success by saying that subsequent experiences have not produced such dramatic results. From June 1973 to December 1973, 34 (58.7%) of 58 patients experienced good results from acupuncture treatments.

Dr. Derrick also showed the board and the hearing participants a series of articles illustrating the sensationalism of acupuncture by the news media since 1972. He attributed to this sensationalism the public's false expectation that acupuncture is a cure for every known malady. He emphasized that acupuncture was not by nature benign and may result in various complications.

The pain clinic at MD Anderson receives many letters from persons wanting acupuncture treatments. Because many people are willing to submit to acupuncture treatments and pay high fees for them, the public could easily be exploited by untrained acupuncturists. The MD Anderson pain clinic responds to inquiries from patients by sending them a list of physicians who offer pain control services, including acupuncture.

In answer to a question, Dr. Derrick said that MD Anderson had no plans for a training program. He named only two institutions, the University of California at Los Angeles and Hahnemann Medical College of Philadelphia as having authorized postgraduate studies in acupuncture.

It has been charged that sensationalism of acupuncture by the news media has led to a false expectation by the public that the technique is a cure for every known malady.

Other guest speakers at the hearing included Dr. James E. Galliher (DO) of Dallas, Hou Chi Dung, PhD, assistant professor of anatomy, The University of Texas Medical School at San Antonio, and Mrs. Mary Ann Hunt, manager, Better Business Bureau of Southeast Texas, Inc., Beaumont.

DO discusses acupuncture in practice

Dr. Galliher termed acupuncture an adjunctive therapy to Western medicine and offered observations from his own practice which is now limited to acupuncture. The osteopath explained his procedures to the Board of Medical Examiners. He emphasized the importance of taking a medical history and giving the patient a thorough examination before considering acupuncture. He said the patients referred to him are people in pain, wanting relief. He stated that acupuncture has been found to relieve certain pain, although it is not a panacea or cure-all. If he determines that acupuncture therapy would be of value to a patient, he gives it on a trial basis. According to the doctor, the patient must respond favorably in four to six treatments or he discontinues the therapy. In the past two years, Dr. Galliher said he has conducted 20,000 different acupuncture treatments. He has not compiled statistics but estimates that at least 50% of the patients benefitted from the acupuncture

treatments.

Dr. Galliher warned against physicians' sponsoring acupuncturists because of the risk of exploitation of their medical licenses. He particularly expressed opposition to a non-English speaking acupuncturist performing treatments in a physician's practice. He said that acupuncture may also be used in diagnosis and that communication between doctor, acupuncturist, and patient was of utmost importance.

Dr. Galliher urged physicians interested in acupuncture to seek proper training. His own background includes six trips to Europe to study the technique, and extensive reading. He said he studied for 21 months before performing acupuncture therapy on a patient. Dr. Galliher related a conversation with the president of the Swiss acupuncturists in which the two determined that a minimum of 205 hours of didactic work was necessary to lay the foundation for acupuncture therapy.

Professor urges cultural exchange

Although Dr. Dung agreed with much of what the other speakers had said, his input to the hearing was of a different nature. He expressed the view that it was too premature to determine an attitude toward acupuncture, as it is currently impossible to know what the true Chinese acupuncture therapy involves. He emphasized that there is a great deal of misunderstanding between the United States and China, and that the first priority should be to improve relations so that a group of American scientists could study in China for an extended period of time. Dr. Dung told the board of his own unsuccessful attempts to gain admission to the People's Republic of China to study acupuncture. He recommended that the Board of Medical Examiners try to set up cultural exchange programs to study acupuncture therapy, and then evaluate its position in American medicine.

BBB warns public to determine competency

Mrs. Hunt told the board that the Better Business Bureau became interested in acupuncture when two clinics opened in the Beaumont area this year. The BBB issued a news release asking the public to consider several questions before deciding whether or not they wanted treatment. These questions pertained to such facts as the acupuncturist's references, his sponsoring MD or DO, and other qualifications.

The bureau received many inquiries regarding the clinics, evidencing the public's interest in acupuncture. Reports from persons taking treatments varied. Some indi-

cated improvements. Some patients reported medical histories being taken; some did not. One man who related his experience to the BBB stated that on his first visit he had a consultation with the acupuncturist, with a physician present. On the second visit, the physician was not present and the Asian acupuncturist inserted the needle into scar tissue, causing the patient much pain and resulting in a limp which lasted two weeks. The patient did not return to the clinic.

Mrs. Hunt reported that today there are no acupuncture clinics in the area. The BBB has continued to urge persons to determine for themselves such qualifications as licensing, competency, etc., before submitting to treatment.

Open discussion

In open discussion several hearing participants presented the medical examiners additional views and experiences in the area of acupuncture. One Dallas practitioner stated that there were two phases of acupuncture, acupuncture therapy and acupuncture anesthesia. He said he has found the technique to be a useful adjunct to his practice and uses it in about 10-20% of his daily practice. He expressed the view that to a certain extent the technique could be readily learned by physicians in a relatively short time. He noted that monthly meetings in the Dallas-Fort Worth area were conducted on the subject.

An Austin physician asked that the board rule that only licensed physicians be permitted to use acupuncture. He told of a patient he treated with acupuncture for relief of headache pain. The treatment relieved the symptoms, but the physician subsequently found that an aneurysm was present. He said that an acupuncturist might not have gone further than relieving the symptoms. He agreed, upon questioning by board members, that such a ruling would necessitate a reevaluation of the role of the physicians' assistant.

Southeast Texas Better Business Bureau warns persons to investigate qualifications of acupuncturists including traceable references and sponsoring MD or DO.

Other statements offered to the medical examiners included a physician's discussion of his work with Chinese acupuncturists in a Fort Worth clinic, a woman's testimony of how acupuncture helped her walk again following an accident, a radiation therapist's report on his use of electric stimulation in the treatment of cancer patients, and a medical educator's urging that research be conducted and published in American medical journals, especially in the area of disease treatment.

In closing the public meeting, Dr. Rodarte stated that the Board of Medical Examiners would appoint a committee to research and consider the subject of acupuncture further. The presiding officer indicated that he anticipated a decision by the board in the near future.

LEGAL PROTECTION: FACTS YOU SHOULD KNOW

Sam V. Stone, Jr.
TMA Office of General Counsel

REPORT OF CHILD ABUSE

The recently revised Family Code of Texas provides that any person having cause to believe that a child's physical or mental health or welfare has been or may be adversely affected by abuse or neglect shall report this fact or belief to the county welfare unit, or the county agency responsible for protection of juveniles, or any local or state law enforcement agency.

Nature of the report

The report is non-accusatory in nature and should reflect the reporter's belief that a child has been or will be abused or neglected, has violated the compulsory school attendance laws on three or more occasions, or has, on three or more occasions been voluntarily absent from home without consent of his parent or guardian for a substantial length of time or without intent to return. All reports must contain the name and address of the child, the name and address of the person responsible for the care of the child, if available, and other pertinent information.

The Code provides that all reports received by any local or state law enforcement agency shall be referred to the county child welfare unit or to the county agency responsible for the protection of juveniles. Also, an oral report may be made immediately upon learning of the abuse or neglect to those agencies listed above. The Code states: "anonymous reports, while not encouraged, will be received and acted on in the same manner as acknowledged reports."

Immunity for the reporter

Any person reporting child abuse or suspected child abuse under the provisions of the Code is immune from liability, civil or criminal, that might otherwise be incurred or imposed. Immunity extends to participation in any judicial proceeding resulting from the report. Persons reporting in bad faith or malice are not protected by this grant of immunity. The Code further provides that in any legal proceeding regarding abuse or neglect of a child, evidence may not be excluded on the ground of privileged communication except in the case of communications between attorney and client.

Investigations required

The county child welfare unit, or the county agency responsible for the protection of juveniles, is required to make a thorough investigation promptly after receiving either oral or written reports of actual or suspected child abuse. The law clearly sets forth that the "primary purpose of the investigation shall be the protection of the child."

In the conduction of the investigation, the agency is charged with determining the nature, extent, and cause of the abuse, the identity of the person responsible for the abuse or neglect, the names and conditions of other children in the home, and evaluating the parents or persons responsible for the care of the child, the adequacy of the home environment, the relationship of the child to the parents or persons responsible for the care of the child, and all other pertinent data.

The investigation includes a visit to the child's home, a physical and psychological or psychiatric examination of all the children in the home, and an interview with the child who is the subject of the report. If admission to the home, school, or any place where the child may be is denied, or permission of the parents or persons responsible for the child's care for the physical and psychological or psychiatric examinations cannot be obtained, then the juvenile court or the district court upon cause shall order the parents or the persons responsible for the care of the children, or the person in charge of any place where the child may be, to allow entrance in order that the interview and examinations may take place.

Termination of the parent-child relationship

If before the investigation is complete it is the opinion of the investigators that immediate removal is necessary to protect the child from further abuse or neglect, the investigators may file a petition for temporary care and protection of the child with the appropriate court. The county agency responsible for the protection of juveniles or the county child welfare unit is required to make a complete written report of the investigation together with its recommendations to the juvenile court or the district court, the district attorney, and the appropriate law enforcement agency. On receipt of such a report and recommendation, the court may direct the investigator to file a petition seeking relief under the general provisions for the termination of the parent-child relationship. In such a proceeding, the child may be removed from the home and placed with an "authorized agency" established to care for children or to place children for adoption. Such an agency may also be a private association, corporation, or person approved for the purpose by the State Department of Public Welfare.

Central registry of reports

The State Department of Public Welfare maintains in Austin a central registry of reported cases of child abuse or neglect. The department has also established rules to provide for cooperation with local child service agencies, including hospitals, clinics, and schools. The rules adopted by the department provide for cooperation with other states in exchanging reports to effect "a national registration system."

LIABILITY OF PHYSICIANS FOR ACTS OF HOSPITAL PERSONNEL

In a recent malpractice action, the plaintiff sued his attending physician, the hospital, and a nurse employed by the hospital in its intensive care ward for a negligently administered injection of an antibiotic. Prior to the trial, the hospital and the nurse settled out of court, and the plaintiff proceeded to trial against the physician. The jury returned a verdict in favor of the defendant doctor. The plaintiff appealed, and the appellate court upheld the verdict for the physician.

FACTS: The facts revealed that the plaintiff was admitted to the hospital for treatment of stab wounds. A thoracic surgeon, having staff privileges in the hospital, became his attending physician. The defendant physician performed a thoracotomy and gave written orders for postoperative care of his patient. Among those orders was a direction that the plaintiff be given intramuscular injections, at stated periods, of an antibiotic to control infection. The plaintiff was placed in the intensive care ward. In administering the injection ordered by the physician, the nurse struck the plaintiff's sciatic nerve with a needle, triggering damage to his right leg which included a condition called "foot drop."

The plaintiff argued that the doctor knew, or should have known, that the nurse might improperly administer the injection at a point in what is described as the outer right quadrant of the right hip, so dangerously close to the midline of the hip that it would injure the sciatic nerve. According to the defendant's evidence, the injection of antibiotics to a patient is both a medical and a nursing function depending upon who is present at the time. The hospital's nursing personnel were trained in the proper method of giving injections. Their competency was checked by the hospital at the time of their employ-

ment, and they were periodically reviewed to assure observance of proper nursing standards. The defendant physician introduced testimony that nurses are advised of and fully aware of the dangers of injecting any antibiotic directly into or near the sciatic nerve. The attending physician entrusted the administration of these injections, as a part of postoperative procedure, to the nursing personnel and was not present at the time of the negligently administered injection. He did not select the nurse individually, but wrote general orders addressed to the nursing staff in the intensive care ward.

The plaintiff produced expert evidence that the instructions and training of the nurses at the hospital were deficient regarding proper procedures and precautions in the administration of intramuscular injections in the hip. From the plaintiff's standpoint, the evidence established, at best, either that the doctor was negligent in trusting the plaintiff's postoperative care to the hospital nursing staff or that his attendance and treatment of the plaintiff was not that which a reasonable and competent physician would have exercised. A jury resolved the issues in favor of the physician.[1]

HOLDING: From the evidence it was clearly established that the defendant physician neither selected nor supervised the nurse nor was he present when the nurse administered the shot. Therefore, the "borrowed servant" principle did not apply.

DISCUSSION OF LAW: The fact that a nurse is under a doctor's supervision and control, or acts under his orders in some matters, does not make the nurse the doctor's agent for all purposes.[2] "Control" means a relationship in which one has control over the manner of work performed and the right to supervise the means, methods, and details of the work.[3]

Another basic concept in Anglo-American law is that the person who has been injured has the right to compensation from the person by whom he was harmed. A variation, almost an exception, to this principle is the doctrine of respondeat superior, literally, "let the master answer."[4] According to this idea, when a servant, agent, or employee injures someone while acting within the scope of his employment, the master or employer is liable for his acts. A part of the respondeat superior theory as applied to the physician is the borrowed servant doctrine. Since the negligent employee is on the payroll of the hospital, there arises the question of whether he or she is also the employee of the doctor for the purpose of applying the respondeat superior theory. The borrowed servant doctrine is a legal device by which the physician is rendered liable for the hospital's employee as his own "servant" if the doctor has control or the right of control over the employee at the time of the negligent act.[5]

Whether or not the physician can be held liable for the hospital employee's negligence and whether the doctor can be said to have borrowed and brought the employee under his control by exercising control over the employee depend upon the facts of the particular case. Most cases are within three factual situations: the preoperative or diagnostic stage, the operative, and the postoperative or therapy and convalescence situation.

In the preoperative or diagnostic stage, the courts have generally held that the doctor must be present during preparation or tests, have the authority to direct activities of those assisting him, and employ that authority to assure that the work is properly executed. Only in these instances will respondeat superior apply.[6]

In the operative stage, it has been held that the surgeon's very presence in the room is considered tantamount to the exercise of control.[7] However, even this "captain of the ship" doctrine has been

questioned and liability may be fixed only on those actually at fault and whose control over the tort-feasor is demonstrable.[8]

With reference to the postoperative or convalescence stage, courts have been cautious about extending liability to doctors for the negligent acts of nurses and hospital employees. Before a court will apply respondeat superior in this context, there must be a showing that the doctor was present when the negligent act occurred or otherwise had opportunity to control the servant.[9] A factual showing of control, rather than a presumed control element, is required. It should also be pointed out that a physician's mere instructions to a nurse or hospital employee in respect to his patient's treatment does not create a master-servant relationship. There must be evidence that the required control existed. This evidence is often predicated upon the physician's presence at the time of the negligent act and the fact that he had a genuine opportunity to alter the course of events. It must include not merely the end sought by the employment of another, but also the means and details of its accomplishments; not only what shall be done, but how it shall be done.[10]

So it can be seen that frequently the hospital employee, who is temporarily lent to the physician, continues to carry on hospital duties. The employee's work is of mutual interest to both doctor and hospital, and is performed to effect a common purpose. It can further be seen that the nurse, hospital employee, and hospital will be responsible for their own acts so long as they are not under the control and supervision, or operating at the instruction, of a physician. It is further true that for the physician to be held to be the master in the master-servant relationship (and thus responsible for the employee's actions) the physician may be required to be present and have an opportunity to alter the course of events in relationship to means and details of the medical act.

CONCLUSIONS: It appears that, for the most part, the captain of the ship doctrine is limited to surgical cases. Thus, the physician would normally not be liable for the acts of hospital personnel such as nurses, technicians, or orderlies in regard to treatment, medication, or non-surgical conduct where the physician had no means and details of its accomplishments as to what shall be done and how it shall be done.

TMA Office of General Counsel
Ace Pickens

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1. *Massey v Heine,* 497 SW 2d 564 (Ken Civ App 1973)
2. *Munk v Doctors Hospital,* 403 Fed 2d 580
3. *Shannon v Western Indemnity,* 257 SW 522 (Tex Comm App 1924)
4. Black, *Black's Law Dictionary,* 1475, 4th Ed, West Publishing Co, St. Paul, 1951; Prosser, W. L., *Torts,* 471, 3rd Ed, West Publishing Co, St. Paul, 1964
5. Thode, *The Borrowed Servant Doctrine As It Applies To Operating Surgeons,* 19 SW L Jr 179 (1965); *McKinney v Tromloy,* 386 SW 2d 564, (Tex Civ App 1964); *Western Union Telegraph Co v Rusk,* 120 SW 249 (Tex Civ App); 35 Am Jur, *Master and Servant,* Sec 18; *Porter v Puryear,* 262 SW 2d 933
6. 9 Vill Law Rev 636, 1964
7. *McKinney v Tromloy,* 386 SW 2d 564 (Tex Civ App 1964)
8. Louisell, D. W. and Williams, H., *Medical Malpractice,* Chap XVI, Mathew Bender, New York, 1969
9. 19 SE Law Jr 179
10. *Emerson v Chapman,* 280 Pac 820 (1929)

The Upper Functional G.I. Disorder

The Pseudo-ulcer

Ulcer-like symptoms: no G.I. pathology

X-ray demonstrates normal stomach.

The patient is convinced he has an ulcer. However, symptoms are not quite typical, and x-ray findings are negative. These findings and the results of additional diagnostic procedures exclude an organic basis for the patient's complaints. A diagnosis of "upper functional gastrointestinal disorder" is made, which is supported by the fact that episodes of painful symptoms coincide with episodes of excessive anxiety, as indicated by the history.

It may be useful to explain to the patient the mechanism by which emotions upset normal G.I. functioning, resulting in hypersecretion and hypermotility and thus causing such symptoms as nausea and epigastric pain. In upper functional gastrointestinal disorders, counseling by the primary physician can often help the patient understand how excessive anxiety may cause flare-ups of G.I. symptoms.

A disproportionate number of patients seen by the general practitioner suffer from functional disorders, as do more than half of those seen by the gastroenterologist.* Where milder cases may respond to counseling alone, if symptoms are severe and disabling to any degree, a suitable regimen may include medication to reduce the symptoms and the excessive anxiety that often provokes these distressing symptoms.

In these cases, Librax as an adjunct can greatly contribute to the course of therapy. Its dual action can offer relief of both painful symptoms and excessive anxiety, because each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br. The antianxiety action of Librium® (chlordiazepoxide HCl) makes Librax exceptional among drugs for certain gastrointestinal disorders associated with excessive anxiety; the clidinium bromide (Quarzan™) component furnishes dependable antisecretory-antispasmodic action. Dosage is flexible; it may be adjusted according to your patient's requirements within the range of 1 or 2 capsules three or four times daily, up to 8 capsules daily in divided doses. Please consult the complete product information regarding precautions and adverse reactions.

*Rome HP, Brannick TL: Orientation and mechanism of functional disorders; clinicophysiologic correlation, chap. 133, in *Gastroenterology*, edited by Bockus HL. Philadelphia, W.B. Saunders Company, 1965, p. 1116.

An adjunct in anxiety-related upper functional G.I. disorders

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Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

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Please see summary of product information on following page.

An adjunct in anxiety-related upper functional G.I. disorders

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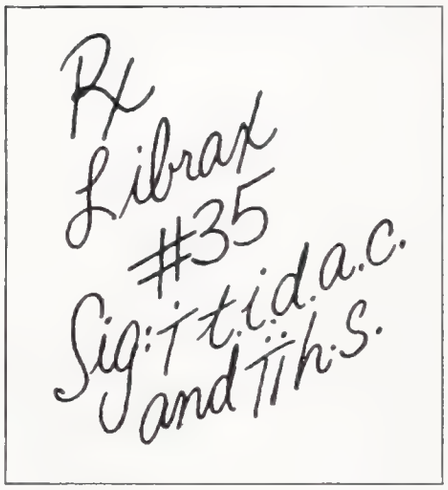

Initial therapy

The initial prescription allows evaluation of patient response to therapy.

Follow-up therapy

Follow-up therapy with a prescription for 2 to 3 weeks' medication usually helps maintain patient gains.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Symptomatic relief of hypersecretion, hypermotility and anxiety and tension states associated with organic or functional gastrointestinal disorders; and as adjunctive therapy in the management of peptic ulcer, gastritis, duodenitis, irritable bowel syndrome, spastic colitis, and mild ulcerative colitis.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido —all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

Dosage: Individualize for maximum beneficial effects. Usual maintenance dose is 1 or 2 capsules, 3 or 4 times a day, before meals and at bedtime. Geriatric patients—see Precautions.

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Medicine in literature

Symposium on Aesthetic Surgery of the Nose, Ears, and Chin. Frank W Masters, MD and John R Lewis, Jr, MD (Eds), C V Mosby Company, St Louis, 1973, $37.50.

This is another collection of the excellent essays being presented in the continuing series of clinical symposia sponsored by the Educational Foundation of the American Society of Plastic and Reconstructive Surgeons. This symposium was held in Phoenix, Ariz., in cooperation with the American Society for Aesthetic Plastic Surgery in November, 1971.

As the editors state in their preface, "The symposium was designed to present a comprehensive review of cosmetic surgery of the nose, ears, and chin." This review is divided into three parts. The first consists of twenty chapters devoted to aesthetic surgery of the nose and presents the techniques of various authors for treating problems in this area. The second part contains ten chapters on aesthetic surgery of the ear and presents several techniques for ear surgery, particularly those for the correction of congenital prominent ears. The third part contains one chapter on aesthetic surgery of the chin ("Chin Augmentation for Microgenia"), one on the use of silicones in surgery for the ear, nose and chin and one on psychiatric and medical-legal implications of surgery in these areas.

While not an exhaustive treatise on the subjects presented, this book is an excellent one and should be in the libraries of every plastic surgeon and medical school. The papers are generally good and most contain bibliographies of numerous references to the subjects.

One of the highlights of the meeting and of the book was the paper of Broadbent and Woolf on "Anatomy of Rhinoplasty-saw technique." At the meeting, a motion picture was shown depicting a rhinoplasty being performed on a cadaver with the skin of the nose removed. This will be especially valuable in teaching residents rhinoplasty techniques. Numerous photographs from the motion picture were reproduced in the book.

Although an excellent book, it is certainly not to be taken and used as a "cookbook" by those who have not had formal training in complete plastic surgery. One deficiency of the presentation is that the material has been fragmented among too many authors. The subjects could have been better covered if fewer essayists had been used and each one had been given more time.

JEFF R MOORE, MD
Amarillo

The Cardiac Arrhythmias, Brendan Phibbs, ed 2, St Louis, C V Mosby Co, 1973, 128 pp, illus, $7.50.

This book was intended to be a basic book for the noncardiologist and therefore should appeal mainly to students, family physicians and internists.

Organization is excellent throughout, with inclusion of review sections called "Problems, Practice, and Reinforcement" which serves as a useful learning device.

EKG identification, clinical aspects, and therapy are all discussed in a clear and easily grasped manner. Although concise, the text includes much significant detail. The author says "if the book has a virtue, it is simplicity." I believe he is most modest for he achieves not only simplicity but a clarity of thought which is most unusual. Anyone interested in arrhythmias from a practical, clinical standpoint should find this book unusually helpful.

MYRON B ZINN, MD
San Antonio

IN THE TMA LIBRARY

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Medical Newsmakers

Newly elected president of the Texas District Branch of the American Psychiatric Association is DR. HARRY K DAVIS. Dr. Davis is associate clinical professor of psychiatry at The University of Texas Medical Branch at Galveston.

DR. J PALMER SAUNDERS assumed the position of dean of the Graduate School and professor of pharmacology July 1 at The University of Texas Medical Branch. He had served as director of the National Cancer Institute's Division of Cancer Research Resources and Centers prior to joining UTMB.

New chairman of the department of radiology at The University of Texas Health Science Center at Dallas is DR. ROBERT NORTON BERK. Dr. Berk, also appointed professor of radiology, came to Southwestern from the University of California School of Medicine, San Diego, where he was an associate professor and chief of gastrointestinal radiology.

An honorary doctor of laws degree, the highest symbol of esteem the university can award, was conferred upon DR. ROBERT S SPARKMAN by Baylor University in Waco. Dr. Sparkman is chief of the department of general surgery at Baylor University Medical Center in Dallas and is also clinical professor of surgery, The University of Texas Southwestern Medical School at Dallas.

DR. HAMILTON FORD, chairman of the Department of Psychiatry at The University of Texas Medical Branch at Galveston since January, 1963, resigned his chairmanship effective September 1, to return to private practice. Dr. Ford said he would continue to hold a faculty position in the department, but would devote more of his time to research and patients' care. Named as acting chairman of the department is DR. IVAN BRUCE, director of the Division of Adult Psychiatry.

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

E J ASHCRAFT
Harlingen, 1921-1974

E T BICKLEY
Corpus Christi, 1909-1974

P G BYRD
Beaumont, 1887-1974

D H CLARK
Corpus Christi, 1914-1974

D MORKOVIN
Dallas, 1911-1974

F PEARCY
Dallas, 1895-1974

H R THOMAS
Dallas, 1907-1974

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Recent deaths

Dr. Ashcraft

Dr. Pearcy

Dr. Bickley

Dr. E J Ashcraft

Dr. E J (Jeff) Ashcraft died in Harlingen May 30, 1974 from a massive intracranial hemorrhage.

The 52-year-old ophthalmologist and otorhinolaryngologist received a BA degree from The University of Texas at Austin, and an MD degree from Baylor College of Medicine in Houston in 1945. Dr. Ashcraft served in the US Navy during World War II and upon his return to Harlingen joined Dr. Thomas J LaMotte in the practice of eye, ear, nose, and throat in 1948. The physician took postgraduate work at New York Polyclinic, Temple University, Philadelphia, and The University of Texas Medical Branch at Galveston and was named a diplomate of the American Board of Otolaryngology in 1957. In 1962, Dr. Ashcraft was elected chief of staff of the Valley Baptist Hospital and served on numerous committees for both the county medical society and the Valley Baptist Hospital as well as the Dolly Vinsant Hospital in neighboring San Benito.

Active in many social and civic groups, Dr. Ashcraft was particularly well known for his Masonic and Shrine work where he was elevated to Potentate of the Divan of El Alzafar in San Antonio in 1966.

Dr. Ashcraft was a member of the Cameron-Willacy County Medical Society, Texas Medical Association, American Medical Association, American Academy of Ophthalmology and Otolaryngology, and Texas Otolaryngological Association.

The doctor is survived by his wife, Jeane Knox Ashcraft, Harlingen; two sons, Jay Arden Ashcraft and Jon Alan Ashcraft of Harlingen; a foster son, Dario Badilla, Dallas; and a sister, Mrs. Ben Arvin, Harlingen.

Dr. F Pearcy

Dr. Frank Pearcy, Dallas psychiatrist, died in Dallas July 22, 1974.

Dr. Pearcy was born in Kelso, Washington, Aug 24, 1895. He received a BS degree and PhD degree from the University of Chicago, prior to receiving his MD degree from Rush Medical College, Chicago, in 1928. Following an internship at Billings Memorial Hospital, Chicago, he held a residency at Rockefeller Institute in New York City. From 1932 to 1937, Dr. Pearcy served as assistant to noted Austrian psychiatrist, Dr. Alfred Adler. He practiced in New York City, specializing in psychiatry, for several years before moving to Dallas in 1946.

Dr. Pearcy was a member of Dallas County Medical Society, Texas Medical Association, American Medical Association, and American Psychiatric Association. He was also a member of the American Association of Advance Psychiatry.

Survivors are his wife, Dorothy Kendrick Pearcy; a son, John K Pearcy, both of Dallas; a sister, Mrs. Hazel McClymonds, Oak Hurst, Calif.; and four grandchildren.

Dr. E T Bickley

Dr. Estill Truett Bickley, Corpus Christi obstetrician and gynecologist, died June 21. Cause of death was pneumonia.

The 65-year-old native of Tenaha held a BA degree from Baylor University and an MD degree from Baylor College of Medicine.

Dr. Bickley served an internship and residency at Shreveport Charity Hospital in Shreveport, La. He organized the first City-County Health Clinic in Corpus Christi in May 1935 and served as city physician for several years. He was also a veteran of World War II. In 1969 Dr. Bickley was hon-

ored by Memorial Medical Center for 25 years of continuous service to obstetrical and gynecological charity patients.
Dr. Bickley was a member of the Nueces County Medical Society, Texas Medical Association, and American Medical Association. He was a fellow of the American College of Obstetricians and Gynecologists.
The doctor is survived by his wife, Juanita Derks Bickley, Corpus Christi; four daughters, Mrs. Gene Gaffney, Mill Valley, Calif; Mrs. Phlete Martin, Corpus Christi, Miss Nita Bickley, Mill Valley, Calif, and Miss Doris Bickley, Corpus Christi; a sister, Mary Conway, Corpus Christi; a brother, Powell Bickley, Kerrville; and two grandchildren.

Dr. H R Thomas

Dr. Harold Rudolph Thomas, 66, died July 6, 1974. He had practiced in Dallas since 1951, specializing in obstetrics and gynecology.
Born in Pine Forest, Tex., he received a BS degree from Southern Methodist University, Dallas, and an MD degree from Baylor College of Medicine, Dallas. Dr. Thomas served an internship at Baylor University Hospital at Dallas and a residency at Municipal Hospital, Tampa, Fla. He completed a residency in traumatic surgery at Casualty Hospital, Washington, DC and a residency in obstetrics-gynecology at Brooke Army Medical Center, San Antonio, and at Robert B Green Hospital, San Antonio. He also served in the US Army attaining the rank of Lt. Col. He was commanding officer of the 97th and 100th station hospitals. Before moving to Dallas, Dr. Thomas had practiced in Slaton and Austin.
Dr. Thomas was a member of Dallas County Medical Society, Texas Medical Association, American Medical Association, Texas Association of Obstetricians-Gynecologists, Dallas Southern Clinical Society, and a diplomate of the American Board of Obstetrics and Gynecology.
Survivors include his wife, Elaine Warfield Thomas; two daughters, Lynn Thomas and Mrs. Sharon Callaway; a brother, Dr. Paul Thomas; and a sister, Mrs. Helen Brown; all of Dallas.

Dr. D H Clark

Dr. Dan Hines Clark, Corpus Christi family physician for 34 years, died July 26, 1974, after a short illness.
Born in 1914, Dr. Clark was graduated with a BS degree from The University of Texas at Austin. He earned an MD degree from The University of Texas Medical Branch at Galveston, and completed an internship at Shreveport Charity Hospital, Shreveport, La. After a year's private practice in Quanah, Dr. Clark joined the US Army during World War II. After the war, he moved his practice to Corpus Christi where he remained until his retirement in 1973.
Dr. Clark was a member of American Academy of Family Physicians, Nueces County Medical Society, Texas Medical Association, and American Medical Association. He was a past president of Nueces County Chapter of American Academy of Family Physicians.
He is survived by his wife, Pauline Waterman Clark; two daughters, Mrs. Diana Kimble, Carrizo Springs, and Mrs. Paula Hicks, Hyde Park, NY; mother, Mrs. Hines Clark, Corpus Christi; two sisters; one brother; and three grandchildren.

Dr. Morkovin

Dr. Byrd

Dr. D Morkovin

Dallas radiologist, Dr. Dimitry Morkovin died May 24, 1974. Carcinoma caused the death of the 63-year-old physician.

Born in Prague, Czechoslovakia, Dr. Morkovin received his preliminary education in that city. He came to the United States in 1933, and was graduated from the University of Southern California, Los Angeles, with BA, BS, and MBA degrees. He received a PhD degree from the University of Illinois, Urbana, Ill, in 1944, and was graduated from the University of Illinois College of Medicine, Chicago, with an MD degree. Dr. Morkovin completed an internship at Cook County Hospital, Chicago, and residencies at the University of Chicago Hospitals; Veterans Administration Hospital, Staten Island, NY; and University of Colorado Medical Center, Denver. From 1951-1953, he served in the Indian Survey for the US Public Health Service, traveling back and forth across the US working directly at the reservations. He served as a full-time staff member of the University of Colorado Medical Center for three years prior to moving to Dallas. Since 1960, Dr. Morkovin served as chief of radiology at the VA Hospital, Dallas, and retired in 1973 due to ill health. He was also a clinical professor at The University of Texas Southwestern Medical School at Dallas.

Professional memberships included Dallas County Medical Society, Texas Medical Association, and American Medical Association. He was a diplomate of the American Board of Radiology.

Dr. Morkovin is survived by two brothers, Mark V Morkovin, PhD, Oak Park, Ill, and George Morkovin, MD, Prague, Czechoslovakia.

Dr. P G Byrd

Peter Graves Byrd, Beaumont physician for over 50 years, died July 14, 1974, at Schlesinger's Geriatric Center after a long illness.

Born in 1887, Dr. Byrd attended Guadalupe College, Seguin, and was graduated from Meharry Medical College School of Medicine, Nashville, in 1913. He moved to Beaumont in 1914 where he practiced medicine until his retirement in 1971.

Dr. Byrd had served as president of the Negro Goodwill Council; South East Texas Dental, Medical and Pharmaceutical Association; and Lone Star State Medical, Dental and Pharmaceutical Association. He was also a member of Jefferson County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by two sons, Peter Byrd, Jr, Beaumont, and C D Byrd, New Iberia, La; two daughters, Mrs. Nettie Jones, Oxyn Hill, Md, and Mrs. Dawn Lungs, Beaumont; three sisters; ten grandchildren; and four great-grandchildren.

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Ⓒ III Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

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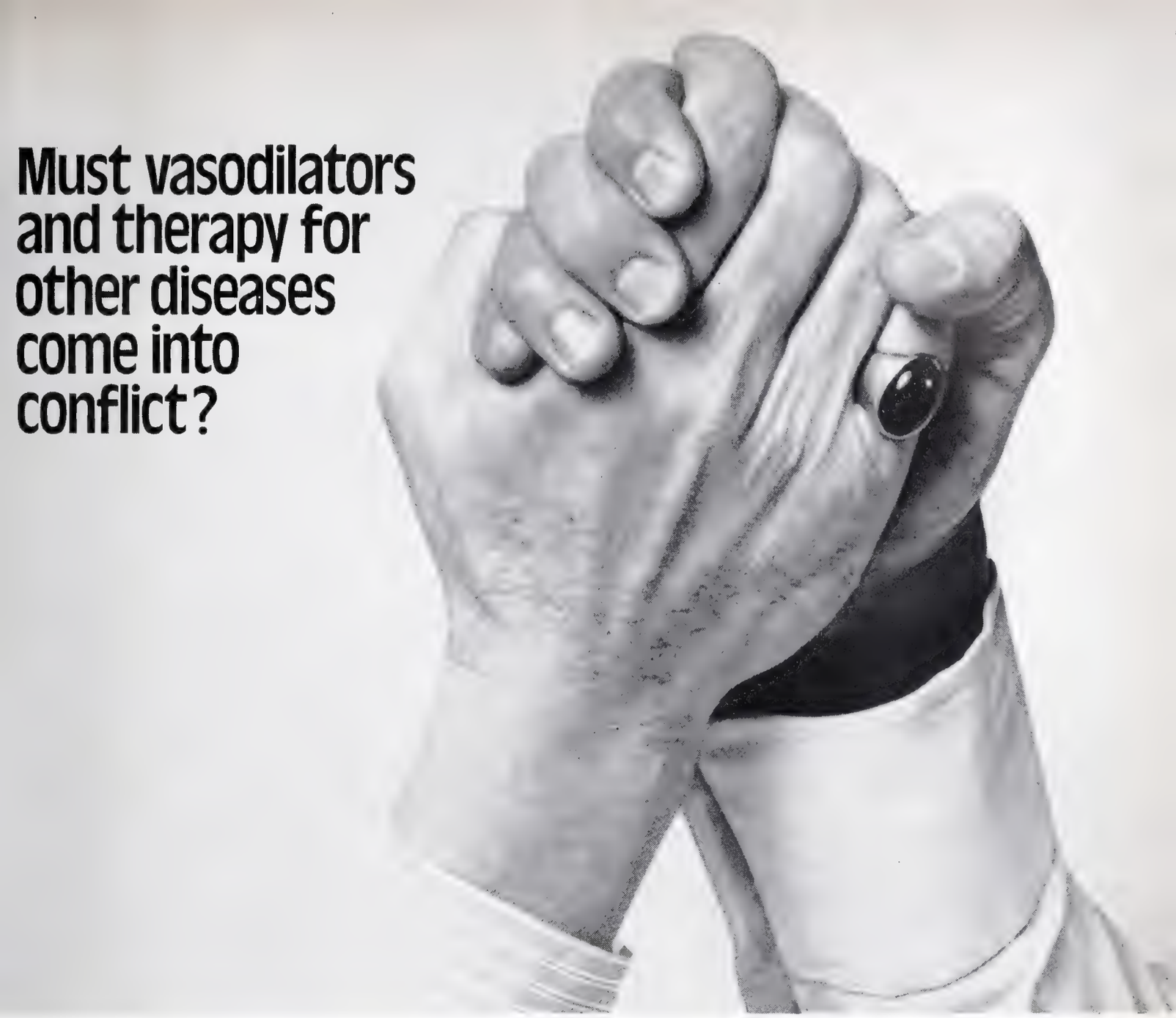
Must vasodilators and therapy for other diseases come into conflict?



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the compatible vasodilator... no treatment conflicts reported

The cerebral or peripheral vascular disease patient often has coexisting disease[1] which calls for another drug along with his vasodilator. It may be a hypoglycemic, miotic, antihypertensive, diuretic, anticoagulant, corticosteroid, or coronary vasodilator.

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In fact, there are no known contraindications to the use of Vasodilan in recommended oral doses, other than that it should not be given in the presence of frank arterial bleeding or immediately postpartum.

1. Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500 and Unit Dose.

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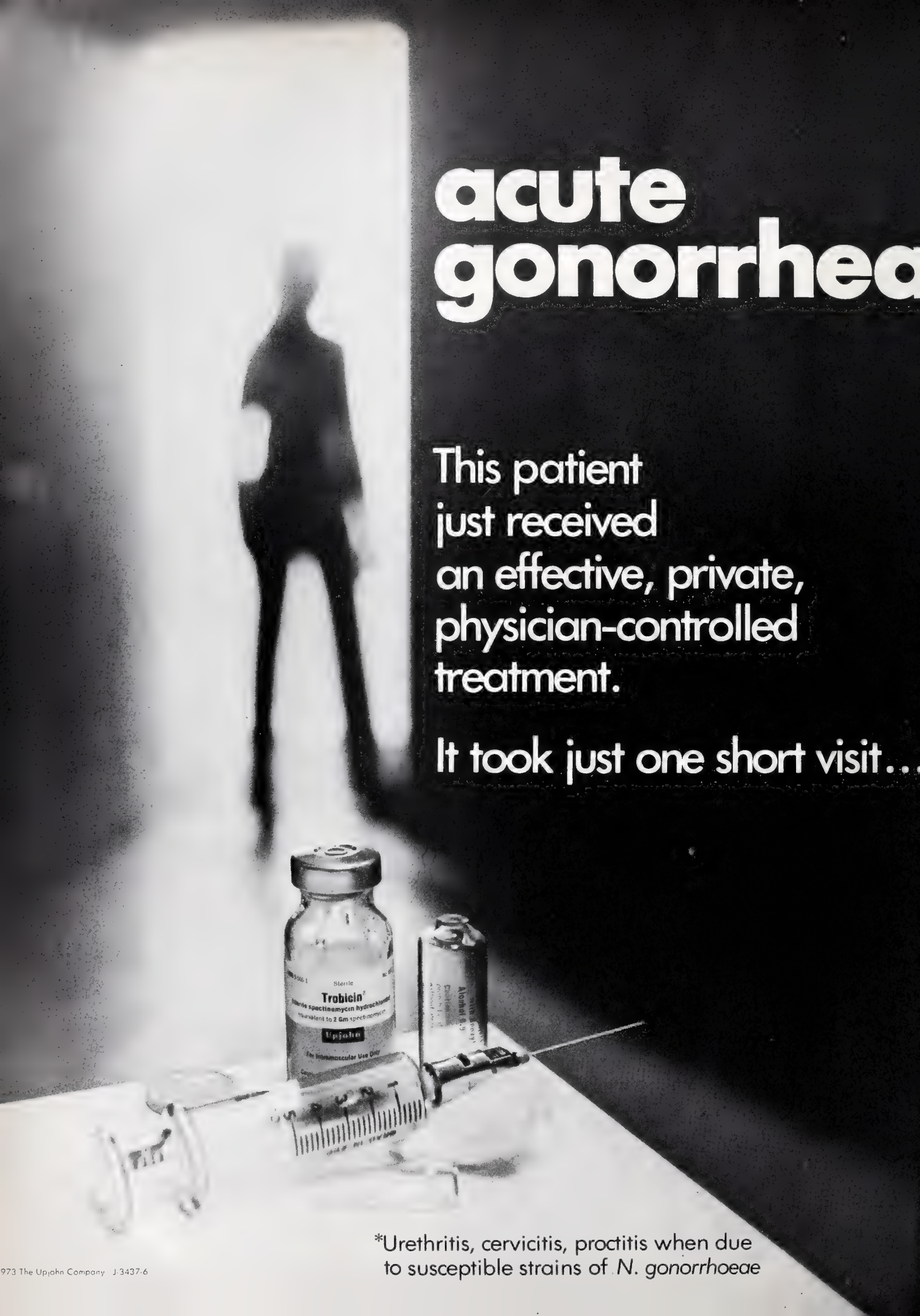

*Urethritis, cervicitis, proctitis when due to susceptible strains of *N. gonorrhoeae*

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Spectinomycin is indicated only for use in acute urethritis and proctitis in the male and acute cervicitis and/or proctitis in the female when due to susceptible strains of *N. gonorrhoeae*. The usual dosage for Trobicin in adult males is 2 grams intramuscularly†; 4 grams intramuscularly in females.

Trobicin—Not effective for syphilis.
Trobicin is not effective for any stage of syphilis. Trobicin may mask or delay the symptoms of incubating syphilis. If concurrent syphilis is suspected, follow the patient serologically for at least 3 months. Patients with syphilis should receive adequate specific anti-syphilitic therapy with an appropriate antibiotic.
Trobicin is contraindicated in patients previously found hypersensitive to it.

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2 gm vials containing 5 ml when reconstituted with diluent.
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An aminocyclitol antibiotic active *in vitro* against most strains of *Neisseria gonorrhoeae* (MIC 7.5 to 20 mcg/ml). Definitive *in vitro* studies have shown no cross resistance of *N. gonorrhoeae* between spectinomycin and penicillin.

Indications: Acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

Contraindications: Contraindicated in patients previously found hypersensitive to spectinomycin.

Warnings: Not indicated for the treatment of syphilis. Antibiotics used to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Patients should be carefully examined and monthly serological follow-up for at least 3 months should be instituted if the diagnosis of syphilis is suspected.
Safety for use in infants, children and pregnant women has not been established.

Precautions: The usual precautions should be observed with atopic individuals.
Clinical effectiveness should be monitored to detect evidence of development of resistance by *N. gonorrhoeae*.

Adverse reactions: The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.
During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single- and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

Dosage and administration: Keep at 25° C and use within 24 hours after reconstitution with diluent.

Male—Inject 5 ml intramuscularly for a 2 gram dose. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.
Female—Inject 10 ml intramuscularly for a 4 gram dose.

How supplied: *Vials, 2 and 4 grams—with ampoule of Bacteriostatic Water for Injection with Benzyl Alcohol 0.9% w/v.* Reconstitution yields 5 and 10 ml respectively with a concentration of 400 mg spectinomycin per ml (as the hydrochloride). For intramuscular use only.
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† For patients with gonorrheal proctitis and for patients in geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams is preferred.

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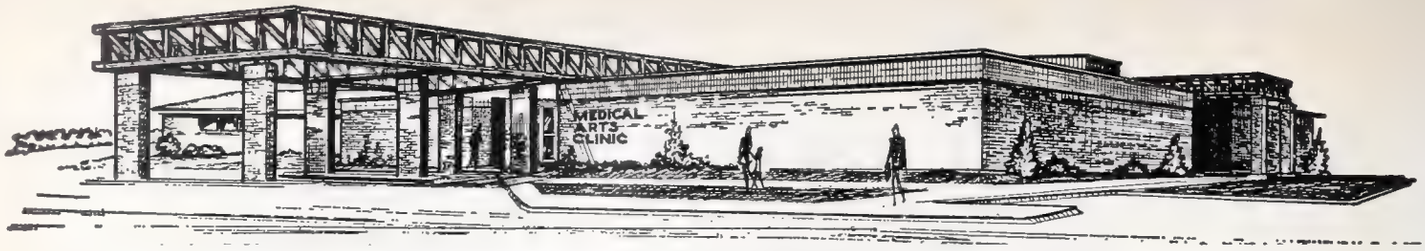

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ORTHOPEDIC SURGEON AND TWO GP's needed by 19 doctor group, 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 3330 South Lancaster Road, Dallas, Texas 75216.

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FAMILY PRACTICE PHYSICIAN NEEDED to join a three man group doing general practice. New community hospital and new clinic building under construction now, modern golf course, large lake, excellent hunting, excellent schools with no busing and no integration problems. 90 minutes from Dallas-Fort Worth. No investment necessary. Salary first year negotiable, with partnership after one or two years if desired. Contact K. J. Wharram, M. D. or A. D. Major, M.D., Nocona, Texas 76255. AC 817-825-3371.

FAMILY PRACTICE with two other physicians. 50 bed hospital adjacent to clinic. Two nursing homes located in town. Large patient drawing area, good fishing, hunting, 8 miles to Lake Whitney, excellent schools, churches, and progressive small town. Guaranteed salary until established, partnership available in future. Contact Morris R. Hill, M.D. or James G. Barton, M. D. at Barton & Hill Medical Association, P. O. Box 546, Whitney, Texas 76692; phone AC817-694-2221.

TWO PHYSICIANS NEEDED. FAMILY PRACTICE PHYSICIAN AND INTERNIST needed to join a full time, seven man clinic association group with part time radiologist and clinical pathologist in Clifton, Texas. Located in the heart of Texas, 35 miles NW of Waco, 15 miles from Lake Whitney. Good fishing, excellent hunting, new, recently completed, modern golf course. Excellent schools, churches and growing progressive small town. Closely associated with new 65-bel hospital facility, which is fully accredited by the Joint Commission. Suggest salary at first with partnership in future. Financial terms open. Please contact V. D. Goodall, M.D., Clifton Medical and Surgical Clinic Association, Clifton, Texas 76634. Telephone 675-8621 or 675-3113.

WANTED: PHYSICIAN TO JOIN GENERAL SURGEON AND GENERAL PRACTITIONER in small town. Privately owned clinic and hospital combination. Guaranteed salary. Prefer family practice specialist. For additional information, please contact M. A. Childress, M.D., P.O. Box 289, Goldthwaite, Texas 76844; Phone 915-648-2212.

FAMILY PRACTICE, with two other family practitioners. Two hospitals with 550 beds within fifteen minute, 4 lane drive. Progressive Central Texas community of 4,350 population. Community void of problems of large cities. 15 miles to Waco (pop. 102,000); 100 miles to Dallas, Fort Worth, and Austin. Good schools (no bussing), churches, country club with 18 hole golf course, three nearby lakes, recreational facilities. An excellent place to raise a family. New associate would be on salary first year; partnership in association later. Exchange calls and weekends with two other physicians. Contact R. Dean Elliott, Administrator, 414 Johnson Drive, McGregor, Texas 76657. AC817-840-3281.

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RADIOLOGIST to associate with multi-specialty clinic, soon to be in new hospital with all new equipment; fringe benefits, good climate, good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

INTERNIST with subspecialty in either pulmonary disease or gastroenterology to associate with multi-specialty clinic, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

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PATHOLOGIST to associate with multi-specialty clinic soon to be in new hospital with all new equipment; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

TEXAS, SAN ANTONIO: EMERGENCY PHYSICIANS NEEDED for new group serving three hospitals; 65,000 ER visits a year. Fee-for-service. Departmental status. Past earning history $45,000 plus additional income for optional participation in employee health service. Write or call George Pruett, M.D., 5239 Round Table, San Antonio, Texas 78218. Telephone 512-653-3612.

UNIQUE CONCEPT: Two family MDs to start in June-July to work nine months rotating schedule, then off three months with salary. Gulf Coast, beaches, deep sea fishing, good attached hospital, salary open first year. Write, call, or come by: Medical Arts Clinic, 1711 West Wheeler, Aransas Pass, Texas 78336; AC512-758-5326.

WE HAVE EXCELLENT OPPORTUNITY in area for GP who wants to do routine surgery, or surgeon who would supplement with FP. Well-established, fully-manned hospital in town. Other physicians would welcome one or two new men. Relaxed life style plus career opportunity for you and your family. More particulars from H. A. Raesener, Jr. (Administrator), Llano, Texas 78643; 915-247-5040.

WANTED: GENERAL PRACTITIONER OR INTERNIST on staff of San Angelo Center. This is an institution for the moderately mentally retarded of the state. Salaries are quite competitive with other state and federal institutions. 40 hour work week, ample vacation time, and other fringe benefits. Excellent community to live near San Angelo, Texas. Contact Medical Director, San Angelo Center, Carlsbad, Texas 76934.

ENNIS, ELLIS COUNTY: OPPORTUNITY for family practice in community of 12,000, serving a trade area of 20,000. Five physicians in town, one hospital, 55 beds, open staff. 35 miles from Dallas. No weekend E. R. call, covered by hospital based physicians. City of Ennis employing physicians on contract basis, office supplied, nurse supplied, billing provided, group hospitalization, paid vacation, etc. Contact Ronald Hudspeth, Administrator, Ennis Municipal Hospital, 803 West Lampasas, Ennis, Texas 75119.

PEDIATRICIAN TO JOIN three board certified pediatric group in professional association; liberal salary and fringe benefits; new pediatric center building to be completed in October is located next to teaching Children's Hospital; beautiful city by the sea, warm year round climate, population 250,000. For details write Box 3154, Corpus Christi, Texas 78404.

SAN JACINTO METHODIST HOSPITAL, BAYTOWN, TEXAS. Physicians solo or group practice; family practice, orthopedics, psychiatry, pediatrics, anesthesiology, etc. Home of Exxon, U.S. Steel, major expansions underway. High income. On bay near Houston. Outstanding schools, colleges. Contact Administrator, 1101 Decker Drive, Baytown, Texas 77520; 713-427-0411, ext. 234.

IMMEDIATE OPENING FOR ONE FULL-TIME MD to complete five-man ER team. 500-bed JCAH approved teaching hospital in Corpus Christi, a town of 225,000 in South Texas. Wanted—settled physician over 40 who has been in private practice, minimal surgical background. Guaranteed $40,000 with 7% annual increase. 40 hour work week. Fringe benefits include one month paid vacation and time for post graduate study. Contact Mrs. Betty Foster, Vice President for Staff Services, Memorial Medical Center, P.O. Box 5280, Corpus Christi, Texas 78405. Telephone 512-884-4511.

INTERNIST AND FAMILY PRACTITIONER NEEDED to associate with a two doctor group that is closely affiliated with a nine member specialty group. Location—West Texas—center of prosperous irrigated agriculture area. Excellent medical town of 20,000. Guaranteed income, future partnership with no investment. Contact E. O. Nichols, Jr., M.D., 715 Houston, Plainview, Texas. Phone 806-296-7425.

INTERNIST-GENERAL PRACTITIONER: Clinic, including lab and x-ray. Join surgeon and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Association, 9801 Katy Freeway, Houston, Texas 77024. Phone 713-468-4338.

PHYSICIANS WANTED for care of mentally retarded at Travis State School, Austin, Texas 78767. Salary attractive. Write or phone the Superintendent or Medical Director, P.O. Box 430, Austin, Texas 78767; Phone 512-926-2410. An equal opportunity employer.

GENERAL PRACTITIONER WANTED—have new office space in private hospital, will negotiate guaranteed income. Excellent opportunity to build practice. General practitioners in organization cover each other on vacation and time off. Specialty staff provides full consultation needs. Pasadena Memorial Hospital, Roland Jones, Administrator; telephone 713-473-3311.

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NEEDED IMMEDIATELY: FAMILY PRACTITIONER. The community has three family practitioners, one will retire shortly. The community and surrounding counties serve over 15,000. The hospital has 77 beds and JCAH approved. The medical community is harmonious and stable. Contact: Edward G. Clark, 713-348-2631, Madison County Hospital, Box 698, Madisonville, Texas 77864.

SOLO OR GROUP PRACTICE—on call every 5th night and every 5th weekend. Contact: Byron Terry, P.O. Box 247, Hughes Springs, Texas 75656, phone 214-639-2577 day, 214-639-2738 night; or Victor L. Harville, M.D., phone 214-645-2246 office, 214-656-2561 home.

FAMILY PRACTICE—OR SPECIALIST willing to practice some family medicine. Solo or associate with established doctor. Excellent potential of establishing as large a practice as desired. New, well-equipped, progressive hospital. Can assure excellent income. Ample office space available. Will consider constructing new clinic. Please reply to Ad-524, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

URGENTLY NEED TWO INTERNISTS OR GENERAL PRACTITIONERS for staff physicians on the medical service, in 346-bed fully accredited GM&S Hospital located in the beautiful Texas Hill Country only 65 miles from San Antonio. Starting salary determined by training and experience. Excellent vacation and sick leave benefits, insurance, retirement, and other fringe benefits. Please write or call Chief of Staff, VA Hospital, Kerrville, Texas 78038; Telephone 512-896-2020, ext. 112. An equal employment opportunity employer.

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PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $22,500 to $29,500 with usual state benefits. Texas license or reciprocity required. Contact the Recruiting Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity/affirmative action employer.

CHILD PSYCHIATRY RESIDENCY may be taken before or after adult psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psycho-pharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities, and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed inpatient unit for children. Liaison with graduate schools, medical school, and community programs. Stipends: First year, $13,000; second year, $14,000; third year, $15,000; fourth year, $16,000. Contact Anthony P. Rousos, M.D., Director of Training & Research, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

PSYCHIATRIC RESIDENCY in approved 3-year program. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty and programs. Stipends with Texas license are $13,000, $14,000, and $15,000 per year. In addition, now offering residency in child psychiatry. For full information write to: Anthony P. Rousos, M.D., Director of Training & Research, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

ORTHOPEDIC SURGEON—Board certified, needed in 60-man multispecialty clinic. Some practice experience preferred. Opportunity to head department. Eligible for partnership in two years. Medical school affiliation. Excellent beginning salary and fringe benefits. Adjacent to Texas Medical Center. Write or call W. D. Seybold, M.D., Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025; Telephone 713-526-2671.

INTERNAL MEDICINE/PULMONARY DISEASES—Need fully trained, clinically oriented chest physician with some laboratory experience. Ideal position for physician with following interests: 1) clinical practice including in-patient and out-patient pulmonary consultations together with approximately 50% general medicine; 2) teaching medical students and housestaff; 3) hospital practice to include rounding with students and housestaff, teaching diagnostic and therapeutic procedures such as bronchoscopy, plural biopsy and thoracenteses, transthoracic pulmonary aspirations, transtracheal aspirations, needle biopsy of intrapulmonary masses, etc. 60-man clinic and satellites. Affiliated with medical school. Excellent fringe benefits. Partnership in two years. Interviewing expenses paid. Call or write J. A. Bakken, Administrator, Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025; Telephone 713-526-2671.

GENERAL PRACTITIONER to join two GP's in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic adjacent to 36 bed hospital recently remodeled. Salary open, partnership available after trial period. Contact Ad-503, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER NEEDED FOR SOLO PRACTICE—30 bed general hospital, Medicare approved. Quiet, rural town. Free office space provided. One other physician on staff. Excellent public school system. Good hunting and fishing. Contact Administrator, Throckmorton County Memorial Hospital, P.O. Box 487, Throckmorton, Texas 76083, 817-849-2151.

PHYSICIANS—715 bed hospital with active medical, surgical, psychiatric services, is in need of an internist, orthopedist, and urologist, all preferably with certification. Excellent consultation, library, and continuing medical education. Close affiliation with Scott and White Hospital in education of house staff. New site for medical school. Salary competitive, ample vacation and sick leave, and fringe benefits. Equal employment opportunity agency. Apply Chief of Staff, VA Center, Temple, Texas 76501.

WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City population, 25,000. Drawing area, 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities, Good schools and churches. Ideal family city. Please reply to Charles D. McMillan, M.D., 170 8th Street, S.E., Paris, Texas 75460.

LOCUM TENENS WANTED: Three weeks in September or October. No surgery or OB, one doctor clinic. Small Texas town. Need vacation. Please reply to Ad-513, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER OR INTERNIST—Excellent location East Texas area. 33 bed hospital, 60 bed long term care facility, JCAH. Solo or salary position (salary open for negotiation). Office space or clinic and housing available. Financial rewards limited only by degree of effort extended. Existing practice waiting. Please reply to Ad-528, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

CHIEF STAFF PHYSICIAN for large refinery and adjoining chemical plant in Texas gulf coast area. Qualified internist or occupational physician with Texas license. Physician will perform pre-employment and periodic physical examinations and handle occupational injuries and illnesses. Excellent benefits and starting salary commensurate with training and experience. Contact W. R. Karn, M.D., AMOCO Oil Co., P.O. Box 401, Texas City, Texas 77590.

OB-GYN PHYSICIAN NEEDED for town of 7,500 population, trade area 40-45M. Eight family practitioners in community desire this specialty. Office space available. Fully accredited 45 bed hospital, located in southeast Texas, 45 minutes from Houston and Beaumont. Coverage available. Contact Jack M. Harrell, Administrator, Yettie Kersting Memorial Hospital, Liberty, Texas 77575; 713-336-7316.

ORTHOPEDIC SURGEON WANTED, Fort Worth, Texas to associate with board certified orthopedist. Please contact Arthur Lorber, M.D., 515 South Summit, Fort Worth, Texas 76104; 817-336-4019.

INSTITUTIONAL PHYSICIAN—needed ½ time—salaried. Particularly attractive for someone new to area or perhaps retired. ½ time local association possible. For particulars, call Dr. William R. Nail, 214-542-2623. McKinney Job Corps Center, P.O. Box 750, McKinney, Texas 75069. An equal opportunity employer.

PHYSICIANS NEEDED: Two full time OB-GYN specialists, in town of 25,000 population and growing industrially. New office facilities are under construction and physician can design office to suit own taste. Dermatologist needed full time. Office space available or can design own office in new medical-dental complex. 20 miles from town of 40,000. 35 miles from town of 100,000. Six million dollar, 140 bed, modern hospital due for completion June 1975. Lake of the Pines and Caddo Lake—30 minute drive. Write: P.O. Box 711, Marshall, Texas 75670 or call 1-214-938-5662.

OPHTHALMOLOGIST: To join well established man in area that is in need of another eye man. R. Wm. Carabelle, M.D., Eye Clinic Association, 3500 Catalina Court, Port Arthur, Texas 77640. Phone 713-985-4325.

Situations Wanted

OPHTHALMOLOGIST—31, married, completing university residency, June 1975. Desire solo, associate, or group opportunity in Houston area. Ronald D. Cox, M.D., 687 Watersedge Drive, Ann Arbor, Michigan 48105.

PHYSICIAN, 29, board certified, internal medicine-endocrinology, would like weekend work, part time. Can do general medicine and minor surgery. Prefer Central Texas, but will travel. Also consider locum tenens. Please reply to Ad-520, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ADMINISTRATIVE OR MEDICAL DIRECTOR position desired by 48 year old certified surgeon. Licensed in Texas. Married with family. Can furnish both professional and personal references. Reply to Ad-521, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST—Board certified; 44 years old. Would like to relocate in Texas. Interested in a small hospital or small group practice. Diagnosis primarily, but trained in therapy and isotopes. Income is secondary to working conditions and fringes. Interested in a small or moderate sized city. Please reply to Ad-522, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST—Board certified in AP & CP seeking hospital appointment. Licensed in Texas. Please reply to Ad-523, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

POSITION WANTED—57 year old radiologist, certified in diagnosis, roentgen and radium therapy, and qualified in nuclear medicine, seeks full or part-time position with group or small hospital. Please reply to Ad-526, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OTOLARYNGOLOGIST—32, married, military completed, seeks partnership or association with one or more otolaryngologists in Dallas area. Available July 1975. Please reply to Warren Katz, M.D., 114 Squire Hill Road, Upper Montclair, New Jersey 07043.

SITUATION WANTED: EXECUTIVE MEDICINE, MEDICAL DIRECTOR: Board qualified general surgeon MSS, MHA, nominee ACHA, 7 years medical director/commander military hospitals, 10 years chief, department of surgery. Special training in medical audit/accreditation surveys, PSRO and medical staff organization/committees. Personal interviews, curriculum vitae on request. Available Sept. 1, 1975. Please reply to Ad-527, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, BOARD ELIGIBLE, wants to relocate in 5,000-10,000 population town with good hospital. Prefer solo practice. Good references. Available immediately. Please reply to Ad-498, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

CARDIOLOGIST, INTERNIST—32, university trained in all aspects, seeks hospital based or group practice. Available July 1975. Contact Richard Rupp, M.D., 2207 Raleigh Lane, Cincinnati, Ohio 45215; phone 513-761-4770.

OPHTHALMOLOGIST completing four years medical school residency June 1975, desires group association or solo practice in small to medium size towns. Licenses NJ-NY. FLEX. Please reply to Ad-531, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PHYSICIAN, TAFP member, 1969 graduate with three years general family practice experience desires to relocate to Dallas area (80 mile radius), within 12-24 months. Possibly associate with other physician or small group. Please reply to Ad-529, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN: 39, board certified, married with children, practicing in a multispecialty group in small midwest community. Wish to relocate to a small community with good school system and growth potential. Solo, partnership or group. Please reply to Ad-530, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST GASTROENTEROLOGIST—35, university trained, all endoscopy procedures including colonoscopy and polypectomy. Desire group or hospital based practice. Available now. Prefer Houston or Dallas-Fort Worth area. Write Ad-532, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

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FOR LEASE—REASONABLE—2,800 sq. ft. medical office building, located across street from Kleberg County Hospital, Kingsville. Large, paved parking area, six examining rooms, two offices, waiting room, lab, business office. Ample room for two doctors. Town delightful, people warm and friendly. Trade area large, opportunities for success unlimited. Available January 1975. Your interest appreciated. Contact Ad-516, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FOR SALE OR LEASE—Office building completely equipped. Rooms—reception, secretarial and records, consultation, three examining, emergency, x-ray, and lab. Air conditioned. Private parking spaces. Five minutes to hospital. Raymondville, Texas 78580. George E. Bennack, M.D.

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CONDOMINIUM FOR SALE on the Gulf of Mexico at Portofino, Padre Island, Corpus Christi, Texas. Three bedroom, two bath, on the sixth floor; 1,579 square feet; living dining and balcony area; all electric kitchen and built-ins. Call Jim Wheeler, 512-883-7922. Shown by appointment. Write P.O. Box 6731, Corpus Christi, Texas 78411.

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Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counselling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

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Minimum qualifications:
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The Diagnostic Clinic of San Antonio, P.A.	47
Dorsey Laboratories	23
Hair Transplant Symposium and Workshop	47
Heritage Company	28
Ives Laboratories, Inc.	27
Mead Johnson Laboratories	19, 123
Kelsey-Seybold Clinic	97
Eli Lilly and Company	48
Loomis-Sayles Funds	120
McNeil Laboratories, Inc.	33
The Martin X-Ray and Radium Clinic	120
Medical Arts Clinic of Corsicana	128
The Medical Protective Company	72
Medicenter Psychiatric Hospital	43
Merck Sharp & Dohme	38-40
The Pharmaceutical Manufacturers Association	88-89
T. Rowe Price Growth Stock Fund, Inc.	47
The Prudential Insurance Company of America	9
Psychiatric Institute of Fort Worth	72
Radiology Associates of Fort Worth	128
Reed & Carnrick	13
A. H. Robins Company	121-122
Roche Laboratories	1-2, 4-5, 30-31, 110-112, 144-145
Roerig	73
Scott and White Clinic	Back Cover
G. D. Searle & Co.	86-87
Seaview Hospital	44
Smith Kline & French Laboratories	32
Starlite Village Hospital	138
Texas International Airlines	43
Texas Medical Association	
African Adventure	17
Automobile Leasing Program	127
Memorial Library Fund	115
Texas State Department of Public Welfare	141
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	128
The Upjohn Company	124-125
Wallace Laboratories	28-29, 74-75
Warner-Chilcott	44-45
Webcon Pharmaceuticals	20
Wichita Falls Clinic-Hospital	120

Physicians' Directory	129-138
Classified Advertisements	139-141

Editorials

DELEGATES NEED YOUR VIEWS BEFORE NOVEMBER MEETING

Ever mindful of its primary commission and obligation to represent and reflect accurately the opinions and views of Texas physicians, the TMA House of Delegates will again convene on Nov 2 at the Sheraton-Crest Hotel in Austin.

Input from TMA members to the House of Delegates is not merely encouraged—it is absolutely mandatory if the delegates properly discharge their responsibilities to their respective constituencies. Such input may be accomplished through direct one-to-one contacts and conversations with individual delegates or through personal appearance before a reference committee.

Every business item presented to the House of Delegates is considered by a reference committee which subsequently renders its report and recommendations to the House. The task of the reference committee is always made easier when a goodly number of TMA members attend and openly express their individual pros and cons on each important issue.

Delegates are keenly responsive to the will and wishes of their hometown colleagues; but unless these colleagues express their will and wishes, delegates must exercise solely their own judgment in arriving at policy decisions.

The name of the game, therefore, is *communication:* communication between each delegate and the members of his/her county society, and also communication between individual TMA members and the reference committees. Without such communication the Texas Medical Association itself is less effective; but with such communication the Texas Medical Association serves as a united voice for the physicians of our state.

Jack B. Lee, MD, San Antonio,
Speaker,
TMA House of Delegates.

NURSE PRACTITIONER: A NURSE BY ANY OTHER NAME

The role of the nurse today varies from that of a true bedside nurse to professors of nursing and administrators. Now a new concept must be added to this role—the nurse practitioner.

What will this mean to the practicing physician? Will this role fill an area of definite need? Will it usurp the prerogatives of the physician? What is its real place in today's health care system?

To answer some of these questions, Ruth F. Stewart, RN, associate professor, University of Texas School of Nursing at San Antonio, has written an editorial on this subject. She is director of a nurse practitioner program in San Antonio.

I would like to hear from any Texas physician who has opinions or ideas on this subject.

Thomas G. Glass, MD,
7702 Louis Pasteur,
San Antonio, Texas 78229.

Nurse practioners are in the limelight these days—acclaimed by some as a solution to the problems that beset the health care system, and deplored by others as interlopers into medical practice. The "expanded" role in nursing exemplified by the nurse practitioner has been evolving slowly but inevitably since the time of Florence Nightingale. It is a natural corollary of the constantly expanding health care industry and an increasingly sophisticated medical practice.

As the boundaries of knowledge have expanded, those implementing that knowledge in health services have continuously readjusted their own activities and their expectations of others working with them. Only in recent years has it become common nursing practice to take blood pressure readings or give penicillin injections. Each of these procedures was once sacrosanct medical practice.

Many of the skills and knowledge now characterizing the nurse practitioner have been implemented for years by nurses in physicians' offices, well-baby clinics, and nursing homes. The newness emanates from two related aspects. The first of these is the open recognition by physicians, patients and nurses themselves that nurses can provide—and have been providing—primary care within the scope of nursing (not medical) practice. Secondly, as a result of this, nurses are being formally educated to provide this care more effectively. Skills are increased in data-collection and decision-making, as well as in the ability to communicate findings with the physician concerning the patient's condition.

Although it reflects changes in nursing, the practitioner role is no less nursing than in the past and no more independent. It does not substitute for medical care. The nurse practitioner can only function in collaboration with a physician, each providing services that complement those of the other. Together these services constitute total health supervision.

Health surveillance by the nurse practitioner provides two major focuses, a data bank for health maintenance and an opportunity for early identification of changes in health status. These changes may indicate the need for medical involvement, with the physician then determining the nature of the change and the appropriate management.

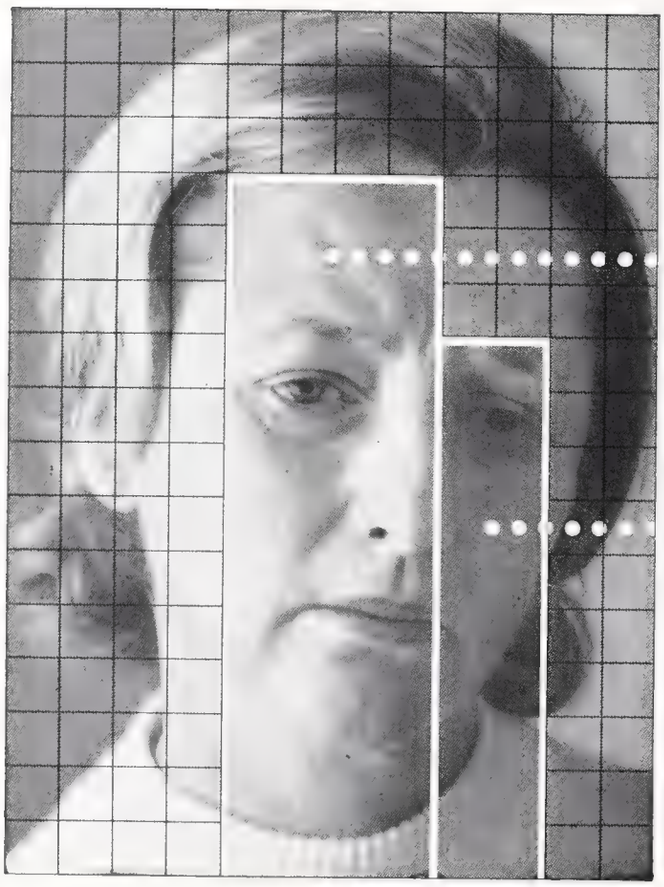
Preventive health involves sustaining personal living patterns, such as nutrition, hygiene, and exercise. Working with individuals to improve these patterns is traditional to nursing practice. Counseling with mothers regarding the activities and the art of motherhood also reflects the traditions of nursing.

The caseload of a nurse practitioner may involve individuals who are basically healthy, such as well children or people who have a medically controlled chronic condition such as hypertension. Continuity of care can be increased as a result of the nurse practitioner's involvement in the continuum of health services, wellness as well as illness.

Public concern is increasing over the problems of the health system, such as manpower and economic resources, as well as the unmet health needs. Those of us within the system must try reasonable alternatives to meet these needs, or risk our credibility. Nurse practitioners working in conjunction with physicians are one viable alternative. And the alternative is, after all, a nurse by any other name. . .

Ruth F. Stewart, MS, RN, San Antonio.

Both often



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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

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Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequ and/or severity of grand mal seizures require increased dosage of standard convulsant medication; abrupt withdr may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous gestion of alcohol and other CNS depr sants. Withdrawal symptoms (similar those with barbiturates and alcohol) h occurred following abrupt discontinua (convulsions, tremor, abdominal and cle cramps, vomiting and sweating). K addiction-prone individuals under car

respond to one

According to her major
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is because her problem,
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provide relief for both—as
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d, the depressive symp-
associated with it are also
relieved.
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anxiety with secondary
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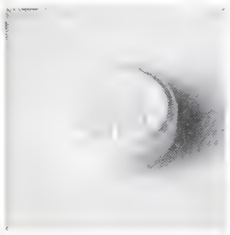
ement is usually apparent
e patient within a few
rather than in a week or
two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.



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As I read my mail...

During the past month several letters have come to my desk concerning the purposes of the $100 assessment which was approved by the House of Delegates in May 1974.

The expressions contained in these letters vary greatly. Some are opposed to PSRO, others support PSRO. There is some opposition to TIMA and TMF. A very few indicate economic factors such as inadequate salaries, debts due to training programs, and low income because of recent entry into private practice. There are even objections that the membership was not requested to vote on the question.

I have drawn three inferences from this correspondence: (1) Most physicians resent governmental intrusion in their work; (2) most physicians resent any questions directed at their honesty and integrity; and (3) physicians give evidence of more independence in their thinking and actions than any other group or profession.

The problem of governmental intrusion in our work and our daily lives is a deplorable but irrevocable fact. There are many benefits of government which we have come to accept, such as issuance and protection of medical licenses. A large percentage of hospital facilities is provided by government, as are most of the medical education institutions. It is regrettable, but most of us welcome the power of government when it serves our purposes, but then denounce other interventions as attacks on freedom. It is a corollary that what government subsidizes, it controls. There is no hope that future expenditures by government in the medical area will decrease.

It is instinctive for us as physicians to resent the intrusion of government in our work for it brings us to the second point, namely, the questioning of our integrity. The traditional, exalted position of the physician has been somewhat eroded by various factors, some of which are attributable to the fact that even physicians are human. As such, a small percentage will indulge in practices which are unacceptable, and which bring censure to the entire profession. It is incumbent on the profession, therefore, to exercise more control over its members, or to abdicate this responsibility to other agencies. This can only be accomplished by an effective peer review mechanism designed to involve the profession in the increasingly important area of socioeconomic medicine, which has lagged far behind the scientific and technical developments of the past 25 years.

My third inference, the widespread independent thinking of physicians, laudable as it is and always has been, unfortunately is a major factor in providing a disunited front in meeting the important challenges which emerged in the past decade. Too much individual liberty coupled with abdication of individual responsibility has really been the source of many of our problems. The hour is late, the prospects appear dim, but nothing is impossible. A small effort on the part of each of us, multiplied 12,000 times, could exert a major force in determining the future of medicine in Texas.

E W Schmidt, M.D.

E. W. Schmidt, MD, President,
Texas Medical Association.

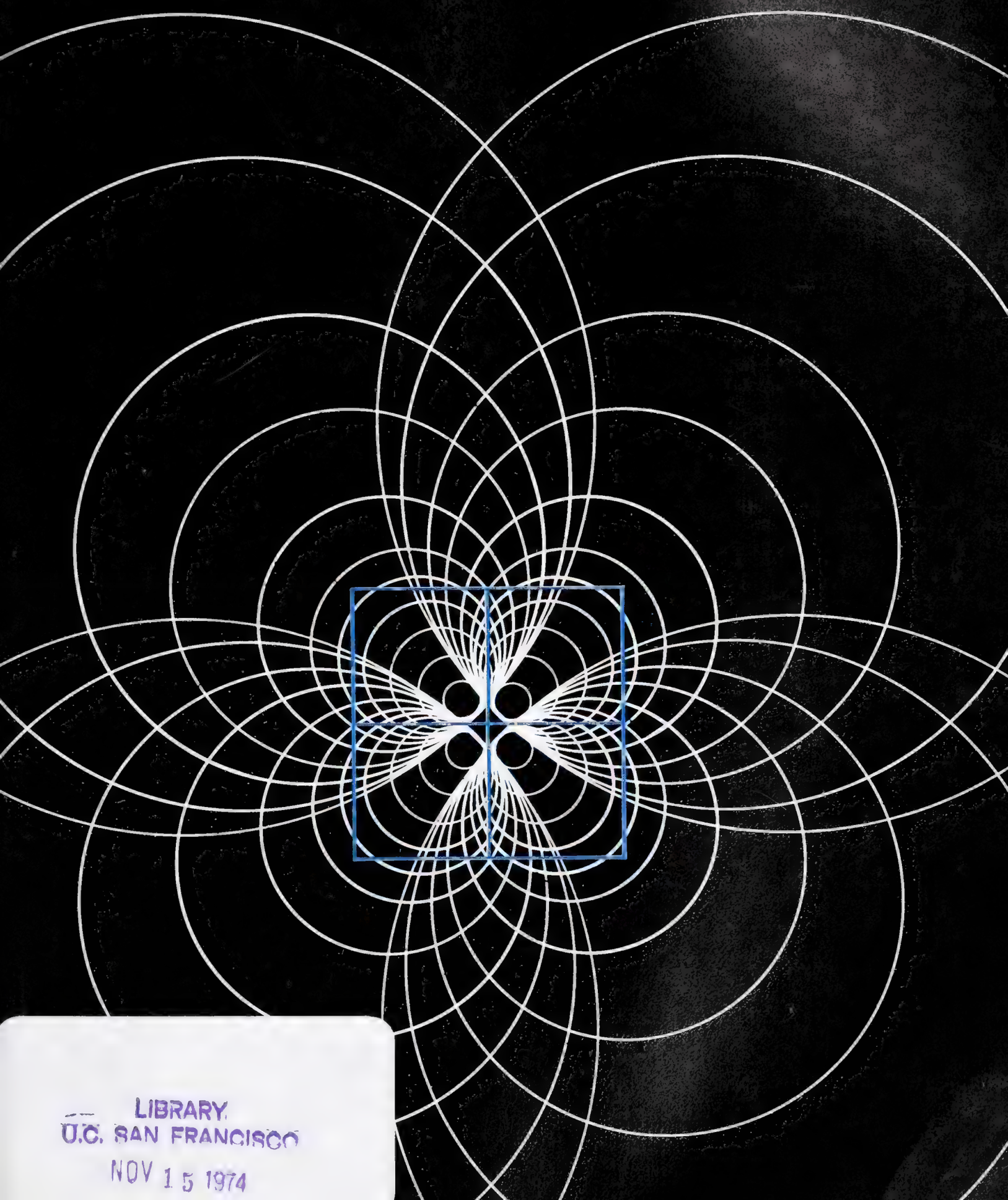
Nov 74

Texas Medicine

Energy, inflation, price controls

Fall Conference wrap-up

Excessive axillary sweating



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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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Contents

SCIENTIFIC ARTICLES

51 Standard versus experimental surgical procedures in the treatment of duodenal ulcer
Dr. James C. Thompson

67 Excessive axillary sweating
Dr. Robert L. Sewell

69 Laser surgery in otolaryngology
Dr. M. Stuart Strong

79 Erosion of splenic artery and colon by pancreatic pseudocyst
Dr. Edward A. Lefrak;
Dr. Ferenc L. Korompai

82 Early nonejection systolic clicks
Dr. Antoine T. Nasrallah;
Dr. Galal M. El-Said;
Dr. Efrain Garcia;
Dr. Yousef M. Goussous;
Dr. Mark I. Feldman;
Dr. Robert J. Hall

88 Diagnosis and management of renal calculi
Dr. Roy A. Kaplan;
Dr. Charles Y. C. Pak

EDITORIALS

138 Energy, inflation, price controls
Dr. W. Philip Gramm

144 Medical care lagging behind cost of living increases
Dr. E. W. Schmidt

FEATURES

99 Confraternity committee: it's working in Nueces County

102 Status of health maintenance organizations in Texas

NEWS

6 TMA fall conference

10 Executive Board actions

11 House of Delegates to meet

11 Assessment report

11 Child abuse project

12 HRIG in short supply

12 TMA health column

13 May Owen pathology chair

13 Southern health care below national level

15 Survey on national health insurance

15 Stetler refutes adverse publicity

17 Conference highlights on tape

17 Medical school enrollments sets record

17 Deadline for exhibits

19 Medical branch grant

19 Cancer rehabilitation program

20 Board clarifies statement on physicians' assistants

20 Medical assistants certified

20 Committee reports on maternal deaths

DEPARTMENTS

24 Information for Authors

25 Capital Comments

31 Continuing Education

44 Coming Meetings

105 Legal Protection: Facts You Should Know

107 Medicine and the Law

110 Medical Newsmakers

112 Recent Deaths

ON THE COVER

Communications flow upward and downward, inward and outward. One of the ways that physicians communicate with each other is through meetings at levels ranging from the local hospital to national organizations. This month *Texas Medicine* brings you a report on the Texas Medical Association's Fall Conference and Executive Board meeting, notice of a meeting of the TMA House of Delegates in November, and—as in every issue—a list of coming meetings of interest to Texas physicians.

NEXT MONTH

In December, scientific topics will include child abuse; causes and treatment of night terrors in children; evaluating head trauma in children; treating lumbar disc lesions by prolonged continuous reduction of intradiscal pressure; long-term follow-up of tibial condylar fractures; pathophysiology of osteoporosis; and the acute renal failure syndrome.

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Indications: Based on a review of PREMARIN Tablets by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications for use as follows:
Effective: As replacement therapy for naturally occurring or surgically induced estrogen deficiency states associated with: the climacteric, including the menopausal syndrome and postmenopause; senile vaginitis and kraurosis vulvae, with or without pruritus.
"Probably" effective: For estrogen deficiency-induced osteoporosis, and only when used in conjunction with other important therapeutic measures such as diet, calcium, physiotherapy, and good general health-promoting measures. Final classification of this indication requires further investigation.

Contraindications: Short acting estrogens are contraindicated in patients with (1) markedly impaired liver function; (2) known or suspected carcinoma of the breast, except those cases of progressing disease not amenable to surgery or irradiation occurring in women who are at least 5 years postmenopausal; (3) known or suspected estrogen-dependent neoplasia, such as carcinoma of the endometrium; (4) thromboembolic disorders, thrombophlebitis, cerebral embolism, or in patients with a past history of these conditions; (5) undiagnosed abnormal genital bleeding.
Warnings: Estrogen therapy should not be given to women with recurrent chronic mastitis or abnormal mammograms except, if in the opinion of the physician, it is warranted despite the possibility of aggravation of the mastitis or stimulation of undiagnosed estrogen-dependent neoplasia.

The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, retinal thrombosis, cerebral embolism and pulmonary embolism). If these occur or are suspected, estrogen therapy should be discontinued immediately.

Estrogens may be excreted in the mother's milk and an estrogenic effect upon the infant has been described. The long range effect on the nursing infant cannot be determined at this time.

Hypercalcemia may occur in as many as 15 percent of breast cancer patients with metastases, and this usually indicates progression of bone metastases. This occurrence depends neither on dose nor on immobilization. In the presence of progression of the cancer or hypercalcemia, estrogen administration should be stopped.

A statistically significant association has been reported between maternal ingestion of diethylstilbestrol during pregnancy and the occurrence of vaginal carcinoma in the offspring. This occurred with the use of diethylstilbestrol for the treatment of threatened abortion or high risk pregnancies. Whether or not such an association is applicable to all estrogens is not known at this time. In view of this finding, however, the use of any estrogen in pregnancy is not recommended.

Failure to control abnormal uterine bleeding or unexpected recurrence is an indication for curettage.
Precautions: As with all short acting estrogens, the following precautions should be observed:

A complete pretreatment physical examination should be performed with special reference to pelvic and breast examinations.

To avoid prolonged stimulation of the endometrium and breasts in climacteric or hypogonadal women, estrogens should be administered cyclically (3 week regimen with 1 week rest period—withdrawal bleeding may occur during rest period).

Because of individual variation in endogenous estrogen production, relative overdosage may occur which could cause undesirable effects such as abnormal or excessive uterine bleeding, mastodynia and edema.

Because of salt and water retention associated with estrogenic anabolic activity, estrogens should be used with caution in patients with epilepsy, migraine, asthma, cardiac, or renal disease.

If unexplained or excessive vaginal bleeding should occur, reexamination should be made for organic pathology.

Pre-existing uterine fibromyomata may increase in size while using estrogens; therefore, patients should be examined at regular intervals while receiving estrogenic therapy.

The pathologist should be advised of estrogen therapy when relevant specimens are submitted.

Because of their effects on epiphyseal closure, estrogens should be used judiciously in young patients in whom bone growth is incomplete.

Prolonged high dosages of estrogens will inhibit anterior pituitary functions. This should be borne in mind when treating patients in whom fertility is desired.

The age of the patient constitutes no absolute limiting factor, although treatment with estrogens may mask the onset of the climacteric.

Certain liver and endocrine function tests may be affected by exogenous estrogen administration. If test results are abnormal in a patient taking estrogen, they should be repeated after estrogen has been withdrawn for one cycle.
Adverse Reactions: The following adverse reactions have been reported associated with short acting estrogen administration:
nausea, vomiting, anorexia
gastrointestinal symptoms such as abdominal cramps and bloating
breakthrough bleeding, spotting, unusually heavy withdrawal bleeding (See DOSAGE AND ADMINISTRATION)
breast tenderness and enlargement
reactivation of endometriosis
possible diminution of lactation when given immediately postpartum
loss of libido and gynecomastia in males
edema
aggravation of migraine headaches
change in body weight (increase, decrease)
headache
allergic rash
hepatic cutaneous porphyria becoming manifest
Dosage and Administration: PREMARIN should be administered cyclically (3 weeks of daily estrogen and 1 week off) for all indications except selected cases of carcinoma and prevention of postpartum breast engorgement.

Menopausal Syndrome—1.25 mg. daily, cyclically. Adjust dosage upward or downward according to severity of symptoms and response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

If the patient has not menstruated within the last two months or more, cyclic administration is started arbitrarily. If the patient is menstruating, cyclic administration is started on day 5 of bleeding. If breakthrough bleeding (bleeding or spotting during estrogen therapy) occurs, increase estrogen dosage as needed to stop bleeding. In the following cycle, employ the dosage level used to stop breakthrough bleeding in the previous cycle. In subsequent cycles, the estrogen dosage is gradually reduced to the lowest level which will maintain the patient symptom-free.

Postmenopause—as a protective measure against estrogen deficiency-induced degenerative changes (*e.g.* osteoporosis, atrophic vaginitis, kraurosis vulvae)—0.3 mg. to 1.25 mg. daily and cyclically. Adjust dosage to lowest effective level.

Osteoporosis (to retard progression)—usual dosage 1.25 mg. daily and cyclically.

Senile Vaginitis, Kraurosis Vulvae with or without Pruritus—0.3 mg. to 1.25 mg. or more daily, depending upon the tissue response of the individual patient. Administer cyclically.
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No. 866—Each *yellow* tablet contains 1.25 mg., in bottles of 100 and 1,000. Also in unit dose package of 100.

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TMA fall conference sessions focus on medical service, practice management

Discussions on new and pending health legislation and practical problems of practice management highlighted the fall conference of the Texas Medical Association Sept 21 in Austin.

More than 880 physicians and guests participated in the Conference on Medical Service and Practice Management, the TMA orientation program, and board, council, and committee meetings.

In the opening session's inspirational address, Loren Young, DD, of Griffin, Ga, termed medicine the "greatest ministry of all time." Dr. Young discussed his theme, "It's not too late," advising the physicians not to let "periphery become priority." He said that doctors, like ministers, are in the "people business" and that people should be the priority. Dr. Young reflected on the qualities of an achiever and stressed the importance of caring for others.

Medical service issues

Two officials of the American Medical Association, Dr. Ernest B. Howard, executive vice president, and Dr. Max H. Parrott, president-elect, reviewed the current situation on national health insurance and health maintenance organizations.

Dr. Howard predicted that national health insurance would be a major congressional issue in 1975. He stated that the AMA is continuing to support the Medicredit proposal but is "remaining fluid." The medical executive stated that the greatest issue to be resolved by Congress is the extent of government intervention and authority in providing health care coverage to the populace.

Dr. Ed Schmidt presides over the PSRO panel discussion with members (l-r) Dr. Joseph T. Painter, Philip R. Overton, Dr. Charles Max Cole, Dr. Milton Davis, and Dr. Joseph T. Ainsworth.

Dr. Howard suggested viewing the problem in terms of the various categories of coverage. The physician expressed his personal opinion that Medicaid should be retained as coverage for the poor and near poor. Dr. Howard said the program needs to be improved, but he does not feel that it should be federalized as has been suggested by some.

Dr. Howard felt that the best way for the government to expand the area of basic coverage was to mandate that industry provide this coverage for employees. He pointed out that many employers already provide basic health insurance plans.

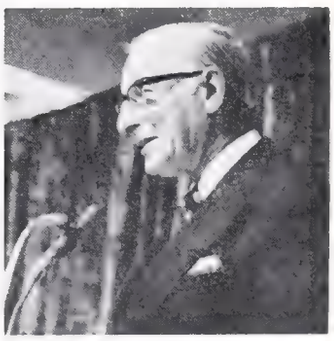
The AMA executive recognized catastrophic coverage as an overriding concern of the public and stated that it should be dealt with in considerations of national health insurance. His suggestion for the least intrusive method for the government's handling of catastrophic protection was, again, a mandate to industry to buy this coverage for employees.

In addition, Dr. Howard mentioned several specific problems relating to national health insurance which are of concern to the medical profession. These included the probability of the adoption of the assignment approach in place of direct billing, the importance of fee-for-service to the nature of professionalism, and the widespread support for governmental control over physicians' fees.

In concluding his remarks, Dr. Howard expressed his feeling that the health care "crisis" has been blown out of proportion in comparison to the other problems facing the nation currently.

Distinguished Service Award goes to Dr. Harvey Renger.

Dr. Parrott on HMOs.



Dr. Howard on NHI.

TMA travel director, Jeanette Prentice, describes highlights of the group travel program.

Five curbstone consultations drew questions from interested physicians.

A bountiful spread at the hospitality hour.

NEWS

HMOs

Dr. Parrott's presentation focused on another issue in health care planning, health maintenance organizations. He discussed the provisions of the Health Maintenance Organization Act of 1973, stating that HMOs under this new law are likely to be organically different from HMO prototypes in terms of membership and the proportion of high risks. Prototypes have been oriented toward specific economic groups rather than toward individuals. Under the new act there will be a period of open enrollment in each HMO. In addition, the law provides that an HMO will utilize a community rating system in which rates are uniform for all individuals or all families of the same size. Dr. Parrott indicated that this is in sharp contrast with the experience rating used by most of the HMO prototypes and prepayment insurance plans. Experience rating is based on the cumulative average risk within the group covered.

Other aspects of HMOs discussed by the AMA president-elect included administrative costs, economics of operation, manpower needs, premium requirements, and quality of service. He emphasized that the AMA has, from the outset, wanted HMOs to be given a fair trial and that the new law should not act as an artificial stimulus in the development of HMOs.

PSROS

Emphasis was placed on the need for physician participation in programs of review to insure professional judgment. "In-place" review, conducted at the time of care, was compared to retrospective review, conducted some time following the care. Physicians were encouraged to initiate voluntary programs of in-place review in their institutions. Physicians were also urged to document their care fully as there is a need for a data system with proper coding and naming to reflect day-to-day medical care.

Distinguished service award

A highlight of the conference was the presentation of the TMA Distinguished Service Award to Dr. Harvey Renger, Hallettsville surgeon. Dr. Renger was selected as recipient of the award during the TMA House of Delegates meeting last May.

Afternoon sessions of the conference featured several talks and informal curbstone consultations on problems of practice management.

Horace Cotton, a medical practice management consultant from Albemarle, NC, discussed professional associations and pension programs. He outlined some of the provisions of the recently enacted Employee Retirement Income Security Act of 1974 including those pertaining to tax deductible pension contributions, reporting requirements, "roll over" of pension accounts, and others. He recommended that physicians start with profit sharing plans because of their simplicity and flexibility.

Through a slide presentation Dr. Rafael C. Sanchez described the purpose and uses of a problem oriented medical records system. The Louisiana State University Medical Center associate dean defined a problem as "anything of concern to the physician or to the patient." Among the advantages of the system mentioned by Dr. Sanchez were improved communications with patients and personnel, increased efficiency of the physician or group, encouragement of research, facilitation of review of patients' charts, and others.

The problem of collections was the topic of William H. Kidd, a management consultant from Raytown, Mo. He emphasized the importance of honesty in letting patients know about office payment policies. He said that each physician must tailor office procedures to meet his or her individual

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needs.
Fourteen authorities in the fields of management, banking, accounting, and investments participated in the five curbstone consultations. Topics included tax records and the Internal Revenue Service, coordinated financial planning for the physician, the problem oriented medical record, professional associations and pension programs for physicians, and collections and expense ratios in office practice.
The conference sessions were followed by a hospitality hour hosted by the Prudential Insurance Company of America and the TMA Group Insurance Program.

TMA Executive Board acts on key issues

The myriad issues facing medicine were reflected in the Sept 22 meeting of the Texas Medical Association's Executive Board in Austin.
The Board held two joint meetings with other organizations during the day, one with the officers and board members of the Texas Veterinary Medical Association and another with the leaders of the Texas Osteopathic Medical Association to discuss issues of mutual interest.
In addition, the board adopted several recommendations to be presented to the House of Delegates on Nov 2 and 3 and took a stand on several urgent issues requiring action prior to the House meeting.
The Executive Board voted to recommend that TMA enter into contract with the Texas Medical Foundation to institute and develop an in-house peer review program.
Progress reports were presented on programs and activities made possible by the $100 assessment, which was approved by the House of Delegates in May. These programs comprised legal, legislative, public and professional education, and peer review. The board also received reports from several ad hoc committees, 1) to evaluate and review duties and responsibilities of TMA councils; 2) malpractice; 3) to coordinate and evaluate activities between Texas Medical Association and Texas Medical Foundation; and 4) to consider an MD executive vice president for TMA.
The board supported the recommendation of the ad hoc committee and the Board of Trustees not to hire an MD executive vice president for the Association. Instead, the board will recommend to the House of Delegates that per diem and expenses be established for the president, vice president, and other physicians who are asked to speak for or represent the Association. Fifty dollars per diem will be requested.
Reiterating a strong position in regard to the development of new medical schools in the state, the board voted to write the governor's office its belief that existing schools for doctors of medicine and the allied health professions should be adequately funded prior to the approval of any new schools.
A member of the Texas college and university coordinating board's advisory committee on medical and dental education also submitted a section of that committee's report to the board for concurrence. Dr. Braswell Locker, reporting as a member of the committee and for the TMA Council on Medical Education and Hospitals, asked the board's endorsement for admissions criteria which would aid medical school admissions committees in selecting applicants who have "attributes such as motivation to serve, integrity, empathy, strength of interpersonal relationship, maturity, emotional stability, and diligence."
He recommended that skilled practicing physicians should be utilized in interviews of applicants, that schools should consider development and validation of tests of noncognitive attributes of applicants, that applications

to medical and dental schools should be actively stimulated from well prepared women and minority group members, and that colleges and universities should give major importance, including time allocation and funding, to counseling services for students in the health professions.

Dr. Locker's recommendations were supported by the Executive Board and will be referred to the chairman of the coordinating board's ad hoc committee.

Also reiterated by the Executive Board during the meeting was the Association's stand in regard to S3585, the Health Professions Educational Assistance Act, then pending in the Senate. The board opposed sections of the bill which call for mandatory service requirements for all medical students, federal control of residency training programs, and federal licensure requirements for physicians. The board's expressions were referred to the conference committee of the Senate and the House and to all of the Texas delegation in Congress.

Other items considered during the seven-hour meeting were approval of accident insurance coverage for officers and members of TMA boards, councils, and committees, improvements in the Association's group comprehensive medical plan, and the individual term-life plan. Other items reviewed by the board and referred for further study related to examinations for licensure, audiovisual programs on emergency medical services, and upgrading Texas ambulance statute. Also recommended was a study of the duties for the Association's cosponsorship of continuing education programs.

The TMA House of Delegates will consider these and other recommendations of boards, councils, and committees during its fall session scheduled for Nov 2-3 in Austin.

House of Delegates to meet Nov 2, 3

A diverse spectrum of medical issues, topics, and recommendations will be considered by the House of Delegates of the Texas Medical Association during its Nov 2-3 meeting in Austin.
A total of 42 reports were submitted for inclusion in the *Handbook for Delegates*. This figure represents a significant increase over the 25 reports presented to the House of Delegates at its first regular fall meeting in November 1973.
The first session of the House is set for 8 am Nov 2 in the Sheraton-Crest Hotel. Six reference committees and the Board of Trustees will meet at 9 am. The House will reconvene the following day to act upon the recommendations of the reference committees.

Assessment report

More than 75% of the Texas Medical Association membership have paid the $100 special assessment voted by the House of Delegates last May.
At press time, the count stood at 9,083 paid members. Members who did not pay prior to Oct 1 are considered delinquent. A delinquent member is not granted the privileges of voting, holding office, or attending annual session.
To be reinstated, a member should submit payment for the assessment by Dec 31.

Project focuses on child abuse

The Texas State Department of Public Welfare has undertaken a statewide educational program relating to the problem of child abuse in Texas.
A public media campaign for the project is being phased into the various regions of the state at intervals sched-

NEWS

uled through the first part of 1975.
One purpose of the campaign is to inform the public, the medical profession, and others involved in child care of the Texas law that requires everyone who suspects child abuse or neglect to report it to the proper authorities. In addition, the welfare department is publicizing its 24-hour toll-free telephone number and encouraging public and professional cooperation in reporting suspected child abuse.
The welfare department plans to distribute informational pamphlets and stickers with the "hot-line" number to physicians and hospitals involved in child care throughout the state.

Health official states HRIG in short supply

Dr. M. S. Dickerson, chief, Bureau of Communicable Disease, Texas State Department of Health, has notified the Texas Medical Association that the health department does not have human rabies immune globulin (HRIG) available for distribution.
HRIG was licensed on July 12 and initially is in short supply. Thus, Dr. Dickerson said, it becomes important that HRIG be used mainly for patients who are extremely sensitive to hyperimmune rabies horse serum. HRIG is prepared from plasma pools with high rabies antibody titer obtained from immunized volunteers and has been shown to induce antibody levels equivalent to those following antirabies serum of equine origin.
The recommended dose is 20 IU/kg. Up to 50% of the globulin dose should be used for infiltrating the wound and the rest for intramuscular injection.
Dr. Dickerson stated that human rabies immune globulin suppresses the antibody response to rabies vaccine as has equine antirabies serum. He said that when hyperimmune serum and vaccine is administered for postexposure rabies prophylaxis, 21 doses of vaccine plus booster doses on the 10th and 20th day after completion of the initial course should be administered to assure an adequate antibody response.
Physicians may obtain HRIG through the distribution center of Cutter Laboratories, 8610 Directors Row, Dallas 75247. The distribution center may be contacted for emergency shipments 24 hours a day, seven days a week at (214) 631-6240.

TMA circulates health column

The Texas Medical Association's Division of Public Relations has increased the circulation of its "Health Tips" column to more than 100 publications across the state.
The monthly column provides practical information on health and safety to readers of civic, fraternal, trade, and other publications.
Plans for further expansion of the column include the writing of a weekly article, offering the column for publication to various state, county, and local newspapers, designing a standard column head, and recruiting the participation of TMA physicians in writing non-technical health and/or safety tips or medical education articles for the general public.
Physicians interested in writing such articles are asked to contact the TMA Division of Public Relations.

"Boy, the price of gas is sure going up."

Dr. Grover E. Murray, center, president of Texas Tech University, and Willard Paine, chairman of the Texas Tech University Foundation Board, express their gratitude to Dr. May Owen, whose generosity has resulted in the establishment of an endowed Chair in Pathology in the School of Medicine.

Pathology chair established at Tech

The first endowed chair to be established at the Texas Tech University School of Medicine honors a past president of the Texas Medical Association. The May Owen Chair in Pathology has been made possible by the Fort Worth physician's personal generosity combined with the support of her friends in the medical profession.

Dr. Owen has been a pathologist in Fort Worth since 1928. A past recipient of the TMA Distinguished Service Award, Dr. Owen has long been active in Texas medicine. She is also a past president of the Tarrant County Medical Society and the Texas Society of Pathologists and has received numerous honors and awards for her contributions to the profession.

At its Sept 27 meeting, the Texas Tech University Board of Regents passed a resolution citing Dr. Owen's many achievements and expressing appreciation for her generosity and inspiration.

An endowed chair provides full salary, travel, office, and other expenses of the professor holding the chair.

Southern health care below national level

According to a recently published profile of southern health statistics, health care in 11 southern states is far behind that of the rest of the nation.

The study, "Health Care in the South: A Statistical Profile," compared demographic figures with mortality and health care statistics in 29 categories for each of the 1,105 counties in the states studied.

The profile was published by Southern Regional Council of Atlanta which claims the study is the first of its kind in the South.

The states included in the report are Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia.

The classic index of general health, infant mortality, varied widely among the states, but was higher in each state than the US average for 1971. Lowest infant mortality statewide rate was in Arkansas, with 19.6 infant deaths per 1,000 live births, compared to the national average of 19.2 for 1971. Highest infant mortality rate was in Mississippi, with 29.1 in-

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fant deaths per 1,000 live births. The Texas profile showed 20 infant deaths per 1,000 live births.
The Texas figures also indicated 1,457 persons per primary care physician compared to the nationwide rate of one primary care physician for every 781 people.
The state showing generally the lowest across-the-board health profile was Mississippi.
Other Texas statistics included a statewide figure of 18.8% of persons living below the poverty index with 6.5% of housing units lacking plumbing facilities.

Survey respondents oppose national health insurance

Seventy-five percent of the respondents to a congressional questionnaire in Texas' 7th District said they did not favor nationalized health insurance totally financed with tax dollars.
The questionnaire, compiled by the Washington office staff of the American Medical Association, was sent by various congressmen to their constituencies. The opinion survey in Texas was conducted by Rep Bill Archer of Houston.
In addition, 61% of the respondents said that states should be granted the right to pass laws restricting abortions.

Stetler refutes adverse publicity

In a letter dated June 21 to the editor of the *Journal of the American Medical Association,* C. Joseph Stetler, president of the Pharmaceutical Manufacturers Association, contested publicized estimations that from 30,000 to 140,000 deaths annually are due to adverse drug reactions.
Other allegations refuted by Stetler included the charge that 1,500,000 hospital admissions annually are caused by adverse drug reactions and that a basic cause of these alleged deaths and hospitalizations lies in over-promotion of prescription drugs by the pharmaceutical industry.
A summary of points raised in the letter by Stetler include the following: 1) the estimates of 30,000 to 140,000 deaths appear to be based on a single study, extrapolated in well-intentioned but erroneous ways; 2) extrapolation, in all except one allegation, was not made to the logical universe of medical admissions but to total hospital admissions; 3) the study involved was a continuing one, and subsequent reports on deaths were reduced fivefold; 4) most of the patients in the study in question were seriously or terminally ill, older individuals.
Stetler further contended that in analyzing this study, and one other available one, where patients with adverse drug reactions would be admitted to the medical service, the number of deaths, extrapolated nationally, could be assessed as between 6,000 to 10,000. He added that at least two-thirds of the patients in both studies had lethal or potentially lethal illnesses, and that no extrapolation actually established that drugs caused the deaths.
From this information, Stetler suggested that a qualified annual estimate of 2,000 to 3,000 hospital deaths are associated with drugs. Of this number, approximately 1,400 are due to accidental poisoning, he said.
In refuting the allegations Stetler cited statistics of the Commission on Professional and Hospital Activities which showed 160,000 hospital admissions due to drug-induced illness.
In addition, Stetler said that the promotion practices of the pharmaceutical industry cannot be responsible for adverse drug reactions. Reasons he named included the fact that a substantial number of the drugs involved are older products which are rarely promoted; promotion is confined strictly to FDA-approved

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claims; unsuspected patient idiosyncracies give rise to unexpected reactions; and others.
The PMA president said that the industry is broadening and intensifying its studies of adverse drug reactions.

Conference highlights offered on tape

Cassette recordings of the highlights of the 1974 Conference on Medical Service and Practice Management are being offered by the Texas Medical Association.
The first cassette will cover the meeting's presentations on legislative issues including national health insurance, health maintenance organizations, and professional standards review organizations. Another tape will highlight the medical practice management topics featured in the afternoon session of the September conference. These subjects include professional associations, pension programs, the problem oriented medical record concept, and collections.
The tapes will be available for purchase, either individually or in the set, and available on loan through the TMA Memorial Library. Physicians interested in obtaining the tapes should contact the TMA Public Relations Division.

Medical schools enroll record number students

According to American Medical Association figures, a record total of 14,436 first-year medical students are enrolled in the 114 medical schools across the country. In Texas, 787 students began their medical studies in the state's six schools for doctors of medicine.
This is the first year in some time in which no new medical schools are admitting students for the first time. However, some schools are scheduled to open their doors in the next two years.
Both nationally and statewide the increased enrollments are attributed to expansion of schools and the admission of new classes by fledgling schools less than four years old.
The breakdown of first year students in Texas schools includes: The University of Texas Medical Branch, Galveston, 205; The University of Texas Southwestern Medical School at Dallas, 200; Baylor College of Medicine, Houston, 168; The University of Texas Medical School at San Antonio, 122; The University of Texas Medical School at Houston, 52; and Texas Tech University School of Medicine, 40.

Deadline approaches for exhibit applications

The deadline for a scientific exhibit application for the 1975 TMA Annual Session in San Antonio is Jan 1.
The TMA Committee on Scientific Exhibits determines if an exhibit entry submitted by a physician or group will be accepted for the May 1-4 meeting.
Exhibit categories include: scientific exhibit without grant or assistance; scientific exhibit with grant or assistance from a university, hospital, government agency, or non-profit organization; scientific exhibit with grant or assistance from a pharmaceutical or other commercial enterprise; and exhibits of educational-promotional nature which carry a message of interest and importance to the medical profession.
Awards are presented in each of the categories as well as for the outstanding exhibit by a Texas physician.
Judging criteria for the exhibits are clarity, effectiveness, personal presentation, contribution to basic knowledge, practical value and originality.
Applications and additional information may be obtained from Dale Werner, exhibit manager, TMA headquarters.

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Federal grant awarded to UT medical branch

The Department of Family Medicine at The University of Texas Medical Branch has received a five-year federal grant of approximately $1 million to support its three-year residency program for family physicians.

With the funding, the residency program will be able to increase from nine residents to 15 residents in the next year, and within the next three years the program should be able to accommodate 18 residents, according to Dr. M. L. Ross, director of Family Medicine and grant administrator.

"The objective over the next five years will be to expand our program for 24 residents," he said.

First year funding on the grant, awarded by the Department of Health, Education, and Welfare, amounts to $139,237.

Cancer rehabilitation aim of new program

With a contract from the National Cancer Institute totaling $1,071,356 for a three year period, The University of Texas Southwestern Medical School at Dallas is assembling teams of experts to provide a service to all types of cancer patients.

The new Cancer Rehabilitation Program being organized is intended to serve as a model to demonstrate cancer rehabilitation facilities. The program will eventually be taken into an eight county North Central Texas area in which there were 19,344 cases of cancer in 1969.

The teams will be prepared to offer a wide variety of services to the cancer patient: physical restoration programs, specialized nursing service, maxillofacial prosthetic consultation, dietary counseling, and counseling of not only the patient but the entire family if warranted.

According to medical school doctors, there has been an "unwarranted pessimism" among medical personnel regarding rehabilitation of the cancer patient. Part of the aim of the program is to help change attitudes.

Dr. Phala Helm, acting chairman of the medical school's Department of Physical Medicine and Rehabilitation is project director.

NEWS

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment media	Original price 9-30-68	Current adjusted price 8-31-74	% Change from 9-30-68
Mercantile National Bank Stock Fund	$10.25	$ 7.44	−27.4
Loomis-Sayles Capital Development Fund	14.20	9.97	−29.8
T. Rowe Price Growth Stock Fund[2]	25.93	9.85	−24.1
Loomis-Sayles Mutual Fund	16.82	14.11	−16.1
Stein Roe & Farnham Balanced Fund	23.34	19.10	−18.2
Mercantile Bank Fixed Income Fund	10.00	10.26	+ 2.6
Standard & Poor 500 Stock Average	101.34	72.15	−28.8
Dow Jones Industrial Average	935.79	678.58	−27.5

[1]Includes accumulated dividends and capital gains since 1968.
[2]Stock split two for one, May, 1973.

NEWS

Board clarifies statement on physicians' assistants

The Texas State Board of Medical Examiners has issued an amendment to its statement regarding physicians' assistants. (For details of the statement, see *Texas Medicine*, September 1974, p 10.)

The clarification deals specifically with that portion of the Medical Practice Act of Texas which prohibits the employment of unlicensed physicians as physicians' assistants.

The amendment to the board's guidelines reads as follows:

"In addition, the Texas Medical Practice Act specifically prohibits employing, directly or indirectly, any person whose license to practice medicine has been suspended, or association in the practice of medicine with any person or persons whose license to practice medicine has been suspended, or any person who has been convicted of the unlawful practice of medicine in Texas or elsewhere."

Medical assistants certified

A total of 540 Certified Medical Assistant certificates, the highest in history, were earned in June by those taking the annual certification examination of the American Association of Medical Assistants.

This record includes 23 who passed the new pediatric examination offered for the first time this year. This program is conducted by AAMA in collaboration with the American Academy of Pediatrics.

In Texas, 38 persons earned certification with 21 in the clinical category, nine in the administrative category, and eight in both.

Beginning in 1975, the examination will have a new format, consisting of the basic certification examination and three specialty examinations: administrative, clinical, and pediatrics.

"You didn't have to bring a donor."

Correction

In the September *Texas Medicine* article regarding his retirement from the Texas College of Osteopathic Medicine, Henry B. Hardt, PhD, was incorrectly identified as a doctor of osteopathy.

Committee reports on maternal deaths

The Texas Medical Association Committee on Maternal Health has reported that the number of maternal deaths increased from 99 in 1971 to 112 in 1972. The number of live births during the same period declined by 14,000 to 214,613.

Maternal deaths from obstetrical complications (direct causes) increased 25% (55 to 69). The increase was primarily due to hemorrhage and infection. Four deaths were caused by disseminated intravascular coagulation with resulting uterine hemorrhage. This condition is encountered in toxemia, dead fetus syndrome, abruptio placenta, amniotic fluid embolus, and certain cases of septicemia. The TMA committee advised that physicians caring for pregnant women need to be able to diagnose and manage this problem.

In addition, intrauterine infection developing prior to delivery appeared

more frequently as a cause of death in 1972 than in previous years.

The committee noted a marked reduction in deaths from hemorrhage due to ruptured uterus with two deaths as contrasted to 31 deaths from hemorrhage in the preceding three years.

According to the committee's report, if the Texas experience parallels that of many other states, death from abortion (12 in 1972) may be expected to decrease as legal abortions become more readily available.

Each maternal death is reviewed by a local county medical society or by the TMA committee as a whole. The facts surrounding the death are analyzed and the cause of death agreed upon.

Preventability is also assessed. Ideal circumstances in patient behavior, application of current information and technical skill, and facility capability are the standards of measurement.

The committee determined that 45 (65%) of the 69 direct obstetric deaths were preventable by patient, physician, facility, or a combination of these factors. Obtaining illegal abortion, delay in obtaining adequate prenatal care, incomplete or insufficient therapy, and error in diagnosis were the common factors in preventability.

II. Causes (67 Autopsies)		
A. Direct Obstetric — 69		
1. Hemorrhage: 25		
Ruptured uterus	2	
Postpartum hemorrhage	5	
Ectopic	5	
Abruptio	4	
Abortion	3	
DIC	4	
Other	2	
Nonavoidable		4
Avoidable		19
Physician	12	
Patient	2	
Two or more factors	5	
Avoidability not determined		2
2. Toxemia: 13		
Congestive heart failure	1	
CVA	8	
Other	4	
Nonavoidable		2
Avoidable		9
Physician	4	
Patient	4	
Two or more factors	1	
Avoidability not determined		2
3. Infection: 17		
Abortal	9	
Antepartum	4	
Puerperal	4	
Nonavoidable		4
Avoidable		12
Physician	3	
Patient	7	
Two or more factors	2	
Avoidability not determined		1
4. Amniotic fluid embolus: 4		
Nonavoidable		4
5. Anesthesia: 6		
General	5	
Spinal	1	
Nonavoidable		1
Avoidable		4
Physician	4	
Avoidability not determined		1
6. Undetermined: 4		
Nonavoidable		4
B. Indirect Obstetrical: 25		
1. Heart Disease: 1		
Nonavoidable		1
2. Vascular Disease: 14		
CVA	5	
Embolus	9	
Nonavoidable		11
Avoidable		3
Physician	3	
3. Other: 10		
C. Nonrelated: 18		

Maternal Mortality Rate (Direct Causes) — 3.2/10,000

I. Location

Major Metropolitan Areas	Live Births	Total Deaths
Bexar County	18,319	14
Dallas County	24,863	7
El Paso County	9,099	9
Harris County	35,301	23
Tarrant County	12,011	6

Councilor Districts (Excluding Above)

District 1	1	District 9	1
District 2	3	District 10	1
District 3	7	District 11	1
District 4	2	District 12	4
District 5	2	District 13	3
District 6	15	District 14	4
District 7	5	District 15	1
District 8	3		

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fool for

doctor, you have a patient.

You wouldn't dream of letting even the most helpful stranger without a medical degree diagnose and prescribe for your illness.

What in the world makes you think you are qualified? They're your insides, you say; you know them like a book. But you don't. Not really.

And the indisposition you call "strep throat" may be no more than the beginning of a cold. Yet if it persists, it could be cancer. The "arthritis" that troubles your right knee too often these days may be a simple little muscular weakness readily curable by easy exercises. Or it might be arthritis. Or a bone fragment from an old injury that needs attention. That little "smoker's hack" you've developed: is it that? Or warnings of emphysema? Tuberculosis? Any of a number of serious irritations caused by inhaling dangerous fibers? Or that word again: is it cancer? The dimming vision: do you have to surrender to gradual loss of sight just yet? Or is it arrestable glaucoma?

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Information for authors

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each paper is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material.

Manuscripts should be typed double-spaced with ample margins on firm paper. Carbons are unacceptable, but the author should keep a copy.

The *title* should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

The *author's names* and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

The *text* should be narrative with complete sentences, *few abbreviations*, and logical subheading. For *spelling and usage* the editors follow "Dorland's Illustrated Medical Dictionary," 24th edition, and "Webster's Third New International Dictionary, Unabridged." *Quotations* must give credit to both author and source. A concise *introductory summary* is required.

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, top, author's name, and title of article in brief. *Legends* should be in complete sentences, numbered, and typed on a separate sheet. *Color illustrations* are authorized if they are of special value.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Permission should be obtained from the publishers and the authors for any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited in the bibliography. Copies of permission letters should be submitted with the manuscript.

All material is subject to *editing*, but authors receive typescripts to check before publication. Prompt return of typescripts to *Texas Medicine* office avoids delay in publication. After the article is sent to the printer, only minimal revision may be made.

Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Editorials should be prepared in the same general manner, and should be written in clear, concise language. They should be 300-500 words in length (about two to three pages typed with double spacing.)

Contributions to the news section should be sent to the Editorial Offices, 1801 N. Lamar Blvd., Austin 78701, by the 5th of the month preceding the month of publication.

PUBLICATION INFORMATION

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Contributions, previously unpublished, are welcomed for review. News and other items should be sent to the Editorial Offices six weeks prior to publication. All contributions are sent at the owner's risk.

Scientific Articles are reviewed by technical and specialist consultants and are selected for publication in Texas Medicine by the Scientific Publication Committee, which is appointed by the Board of Publication. Editorials and other articles are subject to review by officers of the Texas Medical Association, appropriate expert and technical consultants, and representatives of county medical societies when in their purview.

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CAPITAL COMMENTS

AUSTIN: HEARINGS CONTINUE ON HEALTH DELIVERY SYSTEMS. The Joint Subcommittee on Public Health of the Texas House and Senate held a public hearing in Lubbock Aug 29-30. The hearing focused on alternative health care delivery systems with emphasis on the problems in rural areas. Dr. Joel H. Johnson, chairman of the TMA Committee on Rural Health, testified at the hearing and discussed the possible solutions to rural health care as have been defined by the TMA committee.

TMA members, Dr. Ted H. Forsythe, Lubbock, and Dr. H. Edward Downs, El Paso, were among appointees to an advisory board to assist the subcommittee. On Sept 19-20, the subcommittee held a public hearing in Edinburg to explore health systems relating to the poor and medically indigent. Again, two TMA members, Dr. Mario E. Ramirez, Roma, and Dr. Carlos D. Godinez, McAllen, served as advisors. Additional hearings were scheduled for the Dallas-Fort Worth area on Oct 3-4.

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: S 3585 PASSES SENATE. On Sept 24 the US Senate passed S 3585, as amended by Sen J. Glenn Beall (R-Md). The Senate rejected the original version of S 3585 by Sen Edward M. Kennedy (D-Mass) as well as another amendment by Senator Kennedy. In the course of the debate an amendment by Sen William Proxmire (D-Wis) was adopted prohibiting the Food and Drug Administration's control over certain dietary supplements.

The Beall amendment deleted a proposal for mandated service for all health professional students, federal control over residency programs, and federal licensure and relicensure of physicians and dentists.

In addition, the bill as amended would place a limitation upon the number of postgraduate training positions open to foreign medical graduates, and the immigration laws would be amended to bar foreign medical graduates unless they have 1) passed Parts I and II of the National Board of Medical Examiners Examination, 2) demonstrated competency in oral and written English, and 3) demonstrated that their entry would not create a surplus of practitioners in a particular specialty or geographical area. The bill has many other provisions including some 22 types of special project grants as well as $90 million over two years for training, traineeships, fellowships, and family medicine.

WASHINGTON: HOUSE TO CONSIDER BILL SIMILAR TO S 3585. A bill of a similar nature to S 3585 has been reported out of the House Subcommittee on Public Health and Environment. The bill does not require mandatory public service for students of the health professions nor does it dictate federal licensure or relicensure requirements. It does, however, have a provision which would control the number of medical residencies in the United States in an attempt to limit reliance upon foreign medical graduates.

WASHINGTON: SUMMIT CONFERENCE ON INFLATION. The Summit conference on inflation held in Washington Sept 27-28 made recommendations to President Ford supporting the prospective reimbursement for hospitals, impetus for pro-

fessional standards review organizations, expansion of health maintenance organizations, and more emphasis on outpatient and preventive care. In testimony before a pre-summit meeting, the August cost-of-living figures were presented. Physicians' fees rose 1.3% on the consumer price index, the same as "all items" category, and hospital charges rose 1.5%. Food went up 1.4%; clothing, 2.6%; and household operations, 2%. However, the Secretary of Health, Education, and Welfare, told the conference that "drastic and unfortunate federal intervention which could result in nationalizing the entire health industry might be necessary." Since 1971, when controls were established, health care increases have lagged behind other items on the consumer price index.

WASHINGTON: POLITICAL CONTRIBUTIONS NOT FROM AMA. Recent Associated Press, *Washington Post,* and *New York Times* articles have left the impression that the American Medical Association has contributed to the election campaigns of members of the House Ways and Means Committee. As pointed out in the Sept 23 issue of the *American Medical News,* the AMA does not give money to political candidates. The contributions listed in the stories were made by the American Medical Political Action Committee and its state affiliates. The law puts strict limits on the amounts that can be donated, and AMPAC and TEXPAC comply fully with the law. Although AMPAC was singled out in relationship to contributions to members of the committee, according to the *New York Times* the major amount of money for members of the committee came from the political committees of labor unions. Single industries making large contributions through their political action committees were oil, real estate, securities, banking, public utilities, and trucking.

WASHINGTON: REIMBURSEMENT OF MDs IN TEACHING HOSPITALS TO BE STUDIED. The impact of Medicare and Medicaid on reimbursement of physicians in teaching hospitals will be among the subjects of a two-year study that is being undertaken by the Institute of Medicine of the National Academy of Science. The study, which is being conducted at the request of Congress, will include the survey of the 1,500 teaching hospitals across the nation. Also to be considered by the study is the payment of house staff, the specialty and geographic distribution of physicians, and the number and utilization of foreign medical graduates in the United States. The major stimulus for the project was the reaction of teaching hospitals to Sec 227 of PL 92-603. This section describes a new basis for reimbursement of physicians in teaching hospitals.

WASHINGTON: DUKE UNIVERSITY PROF TESTIFIES BEFORE SUBCOMMITTEE. Clark C. Havighurst, professor of law at Duke University, testified recently before the Senate Antitrust and Monopoly Subcommittee on the advantages of the competitive system over a fully regulated and centrally controlled system. Stating that the antitrust laws are potentially useful tools for maintaining a competitive market for health services, Havighurst suggested a new pro-competitive HMO law or even a "little Sherman Act" directed specifically against restraint of trade and monopolization in the health care industry. He also said that until there are uniform federal regulations, the insurance industry will continue its fragmented, expensive method to increase, rather than contain, cost while improving both quality and efficiency.

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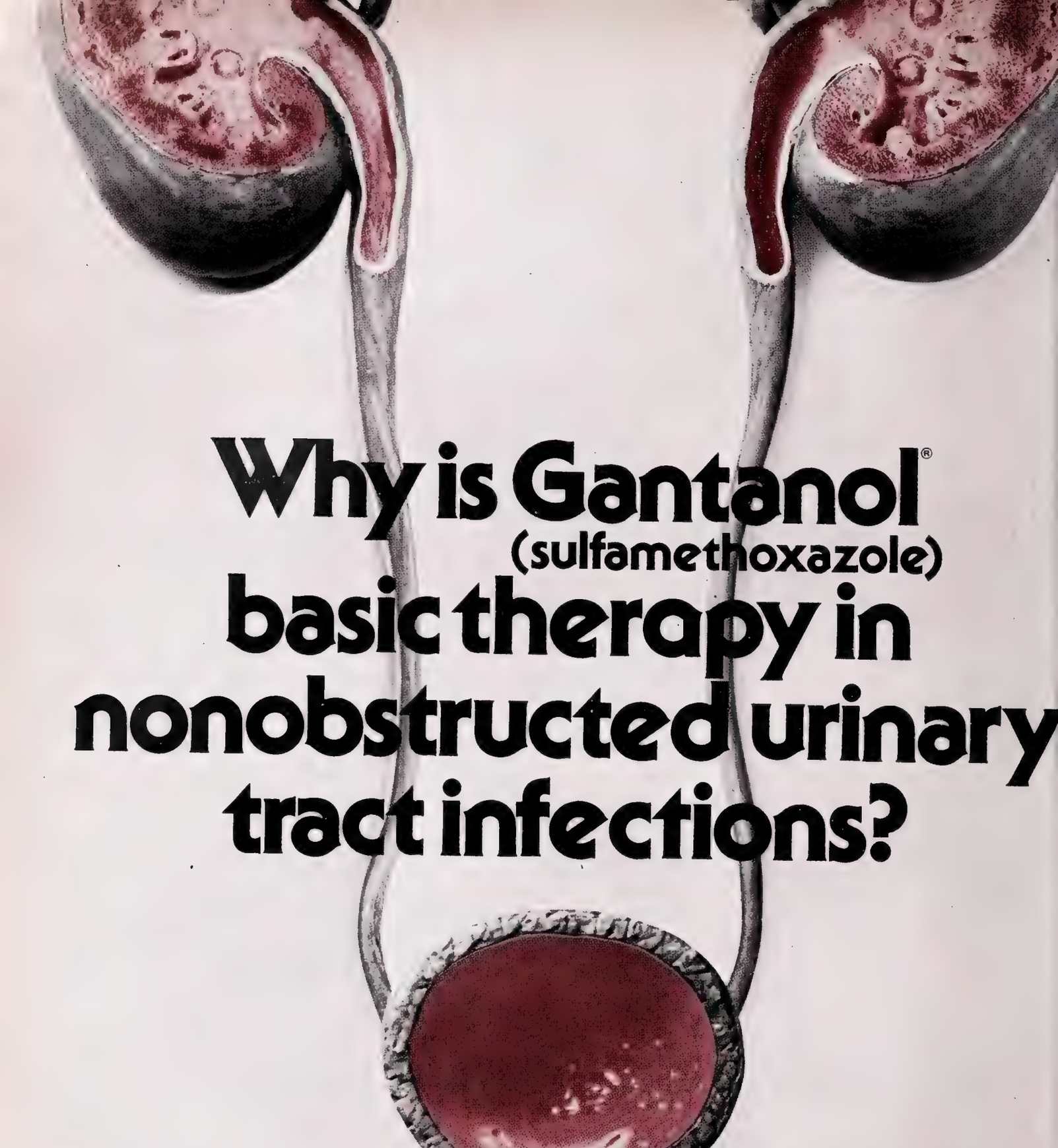

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Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

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pura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

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Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

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Adverse Reactions: Slight hangover, drowsiness, lethargy, headache, skin eruptions, nausea and vomiting, hypersensitivity reactions (especially in those with asthma, urticaria, angioneurotic edema, or similar conditions).
Usual Adult Dosage: For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg.
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CONTINUING EDUCATION COURSES

NOVEMBER

Internal Medicine

Title: Symposium on Old Problems and New Solutions in the Treatment of Hypertension
Sponsors: UT Health Science Center at Dallas; Boehringer Ingelheim Ltd, Elmsford, NY
Location: Inn of The Six Flags, Arlington, Tex
Date: Oct 31, 1974
Credit: AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Norman M Kaplan, Dept of Medicine, UT Health Science Center, 5323 Harry Hines Blvd, Dallas 75235

Title: Diseases of the Liver
Sponsors: Dept of Medicine, University of Miami School of Medicine
Location: Playboy Plaza Hotel, Miami Beach
Date: Nov 21-23, 1974
Fee: Physicians $150; physicians in training $75; nurses $50
Contact: Dr. Leon Schiff, Prof of Medicine, Dept of Medicine, University of Miami School of Medicine, PO Box 520875 Biscayne Annex, Miami 33152

Title: Allergy in Clinical Practice
Sponsors: University of Oklahoma College of Medicine
Location: Howard Johnson's Motor Lodge, Oklahoma City
Date: Nov 15-16, 1974
Fee: $90
Enrollment: Maximum 100
Guest speaker: Dr. Daniel J. Stechshulte, Director, Div of Allergy, Clinical Immunology, and Rheumatology, University of Kansas Medical Center, Kansas City, Kan.
Contact: Office of Continuing Medical Education for Physicians, University of Oklahoma Health Sciences Center, PO Box 26901, Oklahoma City 73190

Title: National Conference on Advances in Cancer Management Part I: Treatment and Rehabilitation
Sponsors: American Cancer Society; National Cancer Institute
Location: Waldorf-Astoria Hotel, New York
Date: Nov 25-27, 1974
Fee: None
Credit: AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Sidney L Arje, National Conference on Advances in Cancer Management Part I: Treatment and Rehabilitation, American Cancer Society, 219 E 42nd St, New York 10017

Family Practice

Title: Family Practice
Sponsors: University of Maryland School of Medicine; University of Puerto Rico School of Medicine
Location: Caribe Hilton Hotel, San Juan, Puerto Rico
Date: Nov 20-24, 1974
Fee: $80
Credit: Category I, AMA Physician's Recognition Award
Contact: The Institute for Continuing Education, PO Box 11083, Richmond, Va 23230

Financial Management

Title: Financial Management Seminar
Sponsors: American Medical Association
Location: Marriott Motor Hotel, Chicago
Date: Nov 2-3, 1974
Fee: $175 AMA members; $195 nonmembers.
Enrollment: Maximum 150
Contact: Practice Management Section, AMA, 535 N Dearborn, Chicago 60610

Obesity

Title: Obesity—Successful Management
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Nov 2, 1974
Fee: $40
Credit: 7 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Obstetrics-Gynecology

Title: Diseases of the Vulva and Vagina
Sponsors: UT Health Science Center at Houston
Location: Houston
Date: Nov 6-8, 1974
Credit: AAFP; Category I, AMA Physician's Recognition Award.
Contact: Dr. Grant Taylor, Director, UT Health Science Center at Houston, Texas Medical Center, Houston 77025

Ophthalmology

Title: Pediatric Ophthalmology Symposium
Sponsors: UT Medical School at Houston
Location: Hermann Hospital, Houston
Date: Nov 9, 1974
Fee: None
Credit: 8 prescribed hours AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Malcolm Mazow, 1121 Hermann Professional Bldg, Houston 77025

Title: Pediatric Ophthalmology
Sponsors: UT Medical School at Houston Program in Ophthalmology
Location: Hermann Hospital Auditorium, Houston
Date: Nov 9, 1974
Fee: $30

Contact: UT Medical School at Houston Program in Ophthalmology, Texas Medical Center, Houston 77025

Orthopedics
Title: Upper Extremity Trauma
Sponsors: American Academy of Orthopaedic Surgeons
Location: San Antonio Convention Center
Date: Nov 20-22, 1974
Fee: $150 physicians; $50 residents (with letter from chief)
Contact: Department of Continuing Education, American Academy of Orthopaedic Surgeons, 430 N Michigan Ave, Chicago 60611

Surgery
Title: Pre-Op and Post-Op Management of Surgical Patients
Sponsors: UT Health Science Center at San Antonio
Location: UT Medical School at San Antonio
Date: Nov 23-24, 1974
Fee: $75
Credit: 9 prescribed hours AAFP; Category 1, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Associate Dean for Continuing Medical Education, UT Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Emergency Room Medical-Surgical Care
Sponsors: Alton Ochsner Medical Foundation, New Orleans; Charity Hospital, New Orleans; Louisiana State University School of Medicine, New Orleans; Tulane University School of Medicine, New Orleans.
Location: Ochsner Foundation Hospital, New Orleans
Date: Nov 11-23, 1974
Fee: $400
Enrollment: Maximum 14
Credit: 96 hours ACEP
Contact: Division of Education, Alton Ochsner Medical Foundation, 1514 Jefferson Highway, New Orleans 70121

Urology
Title: Management of Renal Disease 1974
Sponsors: Kidney Foundation of Houston and the Greater Gulf Coast; Renal Program of the Regional Medical Program of Texas
Location: Marriott Motor Hotel, Houston
Date: Nov 8-9, 1974
Fee: Physicians $20; dietitians, nurses and technicians $10
Credit: 8 elective hours AAFP
Contact: Dr. William G Guerriero, 6535 Fannin, Houston 77025

Title: Urologic Pathology
Sponsors: Baylor College of Medicine, Dept of Pathology, Houston
Location: Baylor College of Medicine, Houston
Date: Nov 14, 1974-Jan 30, 1975
Fee: $300
Designed for: Urologists
Contact: Dr. Joyce S Davis, Associate Professor of Pathology, Baylor College of Medicine, Texas Medical Center, Houston 77025

DECEMBER

Internal Medicine
Title: Cardiology Symposium
Sponsors: UT Health Science Center at Houston
Location: UT Medical School at Houston
Date: Dec 3-5, 1974
Guest Speaker: Dr. Bernard Lown, Professor of Cardiology, Dept of Nutrition, Harvard School of Public Health, Boston
Contact: Office of the Director, UT Health Science Center at Houston, Division of Continuing Education, PO Box 20367, Houston 77025

Title: 11th Annual Postgraduate Pulmonary Function in Health and Disease
Sponsors: American Thoracic Society of Louisiana
Location: Tulane University Medical School Auditorium, New Orleans
Date: Dec 9-12, 1974
Fee: $135
Credit: AAFP; Category I, AMA Physician's Recognition Award
Contact: Course Coordinator, ATS of Louisiana, 333 St. Charles Ave, Suite 1504, New Orleans 70130.

Title: Advances in Analytical Toxicology
Sponsors: Institute of Clinical Toxicology, Houston
Location: Marriott Motor Hotel, Houston
Date: Dec 9-11, 1974
Fee: $100
Contact: Dr. Eric G Comstock, Director, Institute of Clinical Toxicology, PO Box 2565, Houston 77001

Urology
Title: Urologic Management of Neurogenic Bladder, Incontinence, Impotence
Sponsors: UT Southwestern Medical School at Dallas
Location: Children's Medical Center, Dallas
Date: Dec 13-14, 1974
Fee: None
Contact: Dr. Paul C Peters, Chairman, Urology Division, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

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Rondomycin®
(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73

WALLACE LABORATORIES
CRANBURY, NEW JERSEY 08512

When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

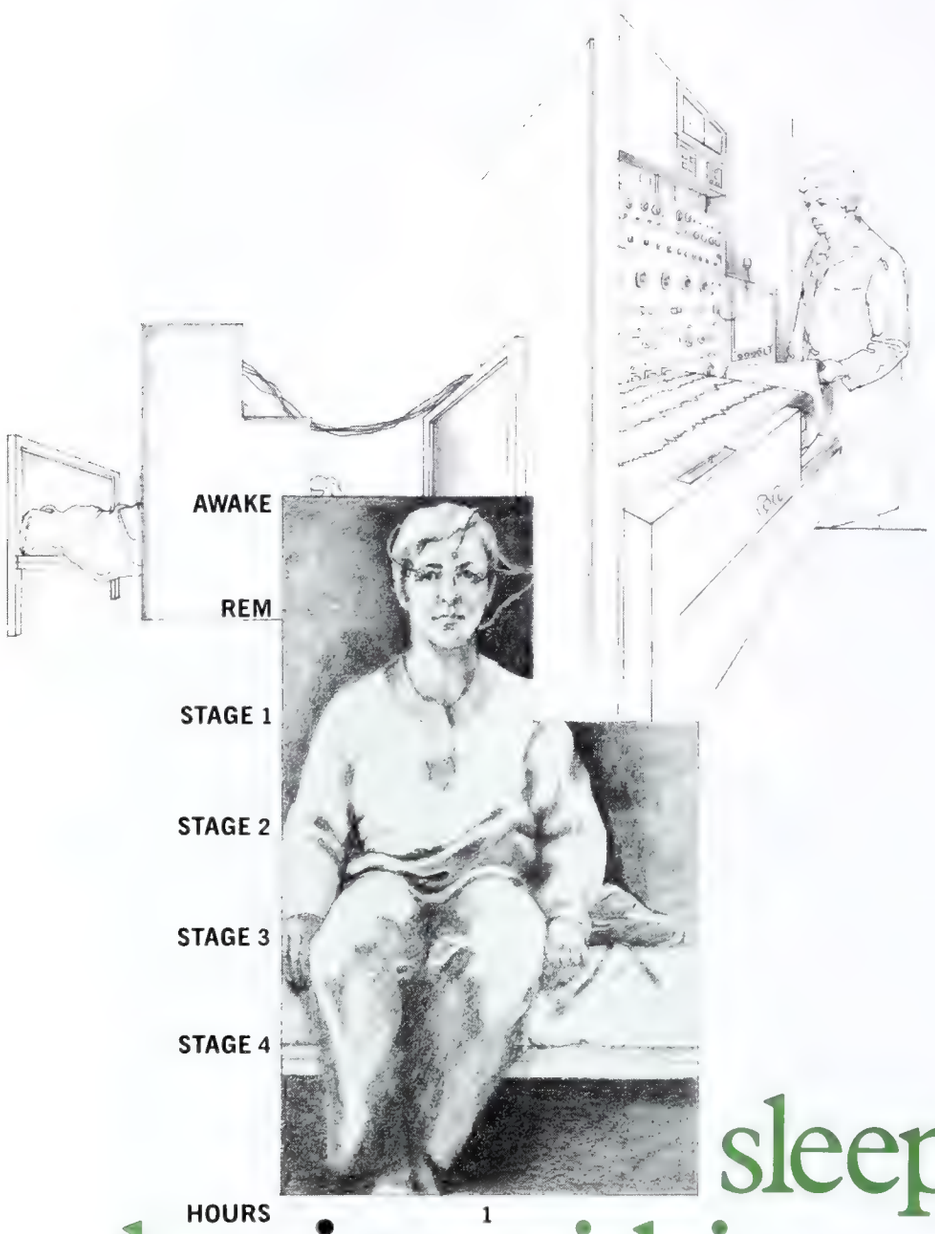
Rondomycin® 300 mg. Capsules

[methacycline HCl]

Delivers from the very first dose:

Studies show that after the first dose serum levels rapidly rise above minimum *in vitro* inhibitory concentrations

*Since many strains are known to be resistant, routine sensitivity testing is recommended.



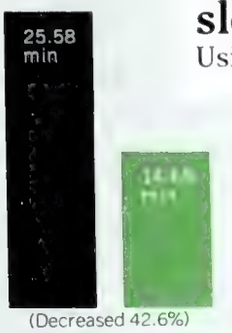
sleep begins within 17 minutes, on average ... an initial benefit of

Dalmane®
(flurazepam HCl)

proved by a 22-night clinical study of insomnia patients in the sleep research laboratory and at home[1]

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]

Average Time Required to Fall Asleep (4 Studies, 16 Subjects[2-5])



(Decreased 42.6%)

Baseline (before **Dalmane**)

Dalmane (flurazepam HCl) 30 mg

confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage[2-5]

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

when restful sleep is indicated

Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.* — usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage

REFERENCES: 1. Kales A, *et al*: *Arch Gen Psychiatry 23*:226-232, Sep 1970
2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
3. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

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Opinion & Dialogue

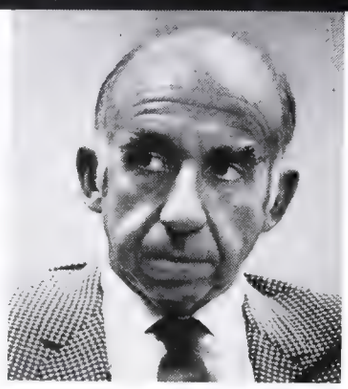
The Role of the Detail Man

Dr. Willard Gobbell
Family Physician
Encino, California

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealing with health problems in this country there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihoo on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in this

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

---

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen; and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

Effective relief of low back discomfort

The addition of Soma 350 (carisoprodol) to bed rest, moist heat and exercise can help restore range of motion by relieving discomfort associated with acute, painful musculo-skeletal conditions.

Economically...with only one tablet *q.i.d.*

Measure the results yourself. (Wallace will even send you a complimentary goniometer.)

Indications: Carisoprodol is indicated as an adjunct to rest, physical therapy, and other measures for the relief of discomfort associated with acute, painful musculo-skeletal conditions.
Contraindications: Acute intermittent porphyria and allergic or idiosyncratic reactions to carisoprodol or related compounds such as meprobamate, mebutamate, tybamate.
Warnings: *Idiosyncratic Reactions:* Rarely, extreme weakness, transient quadriplegia, dizziness, ataxia, temporary vision loss, diplopia, mydriasis, dysarthria, agitation, euphoria, confusion and disorientation have appeared within minutes or hours of the first dose. These usually subside in several hours but supportive and symptomatic therapy, including hospitalization, may be necessary.

Pregnancy and Lactation: Safe use not established; weigh potential benefits against potential hazards in pregnancy, nursing mothers (concentrations in breast milk are two to four times that in plasma), or women of childbearing potential.

Children Under Twelve: Not recommended.

Potentially Hazardous Tasks: Driving a motor vehicle or operating machinery.

Additive Effects: Effects of carisoprodol and alcohol, other CNS depressants or psychotropic drugs may be additive.

Drug Dependence: Use cautiously in addiction-prone patients.
Precautions: To avoid excess accumulation, use caution in patients with compromised liver or kidney function.
Adverse Reactions: *Central Nervous System:* Drowsiness, dizziness, vertigo, ataxia, tremor, agitation, irritability, headache, depressive reactions, syncope, insomnia, idiosyncratic reaction (see "Warnings").

Allergic or Idiosyncratic: In previously unexposed patients, these are usually seen after 1-4 doses and include rash, erythema multiforme, pruritus, eosinophilia, fixed drug eruption with cross reaction to meprobamate. Asthmatic episodes, fever, weakness, dizziness, angioneurotic edema, smarting eyes, hypotension and anaphylactoid shock may be manifestations of severe reactions. In such cases, stop carisoprodol and initiate appropriate treatment (e.g., epinephrine, antihistamines, corticosteroids).

Cardiovascular: Tachycardia, postural hypotension, facial flushing.

Gastrointestinal: Nausea, vomiting, hiccup, epigastric distress.

Hematologic: Leukopenia and pancytopenia (on carisoprodol plus other drugs).
Usual Adult Dosage: One 350 mg tablet three times daily and at bedtime.
Overdosage: Has produced stupor, coma, shock, respiratory depression, and, very rarely, death. The effects of an overdosage of carisoprodol and alcohol or other CNS depressants or psychotropic agents can be additive even when one of the drugs has been taken in the usual recommended dosage. Empty stomach, treat symptomatically; cautiously give respiratory assistance, CNS stimulants, pressor agents as needed. Carisoprodol is metabolized in the liver and excreted by the kidney. Diuresis and dialysis have been used successfully with related drug meprobamate. Carefully monitor urinary output; avoid overhydration; observe for possible relapse due to incomplete gastric emptying and delayed absorption.

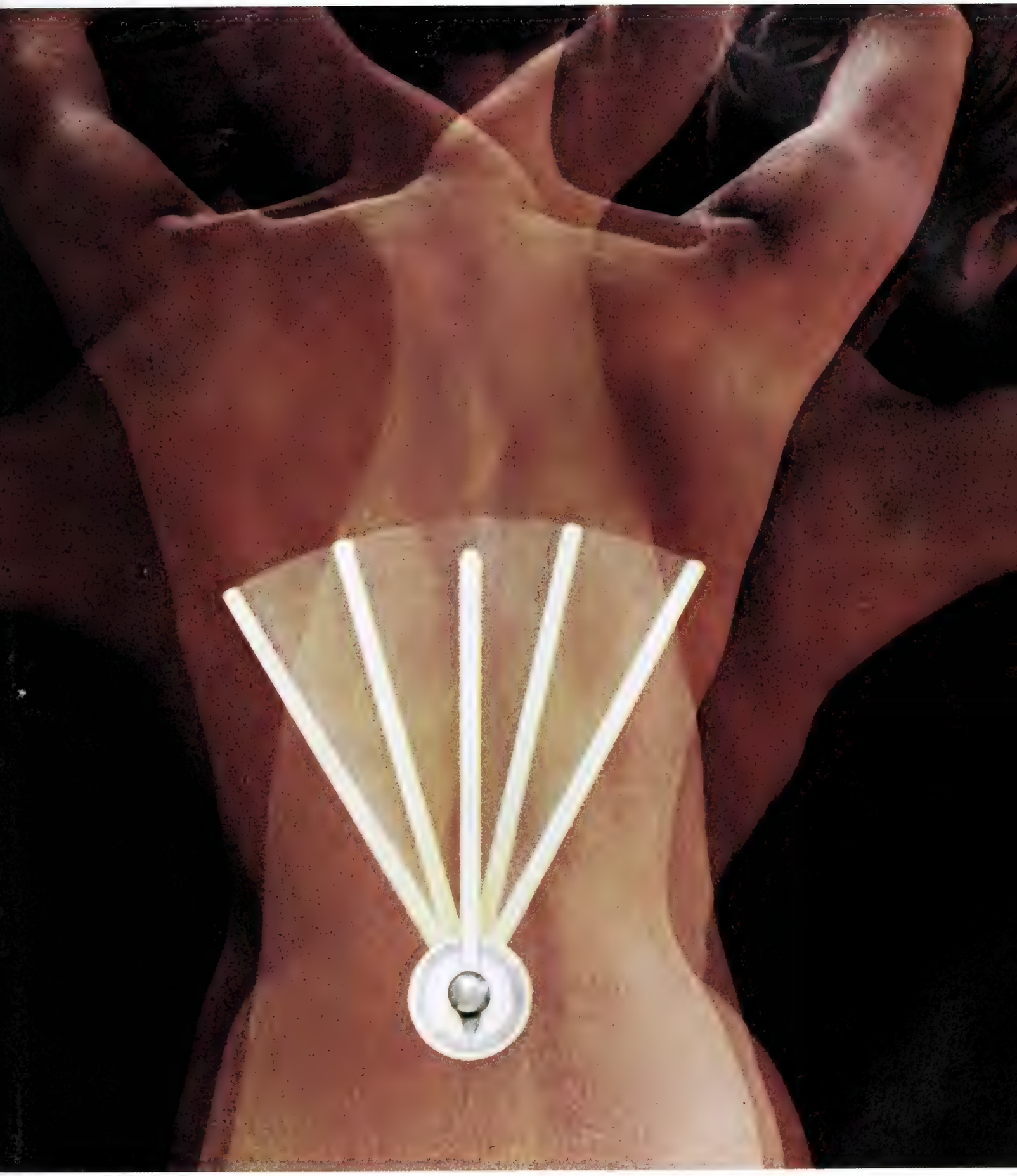
Before prescribing, consult package circular or latest PDR information.

Rev. 8/74

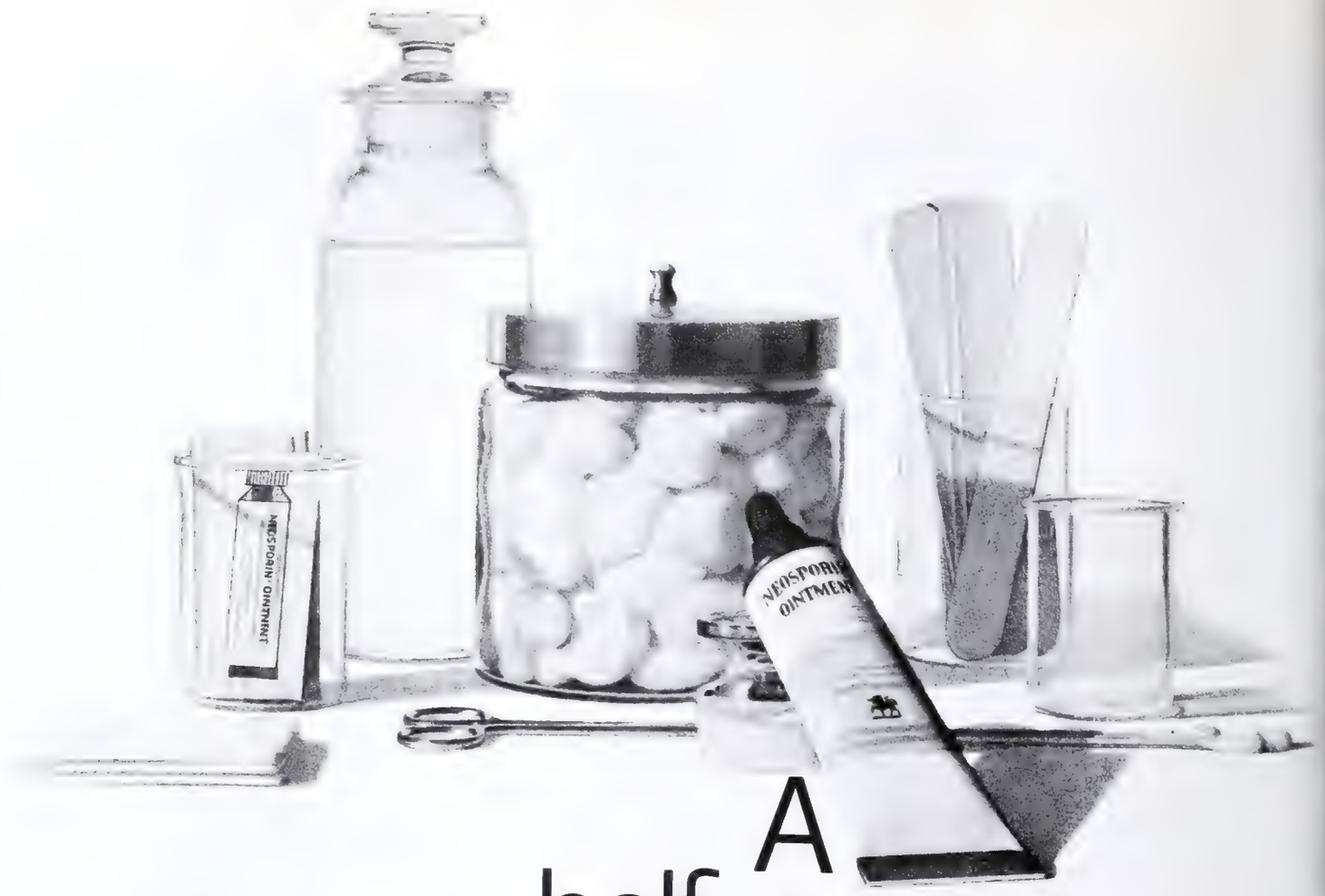
WALLACE LABORATORIES, Cranbury, N.J. 08512

Soma® 350 its power ma

(carisoprodol) 350 mg tablets



e measured in movement



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Use it to prevent a topical infection. Or to treat one that's already started. In either case, it's good medicine. Whether for lacerations, burns, open wounds, IV catheter or surgical aftercare. Neosporin® Ointment provides broad antibacterial coverage against common susceptible pathogens. And since it contains three antibiotics that are rarely used systemically, the risk of sensitization is reduced. Neosporin Ointment. A half-ounce of prevention. Also available in a full ounce of prevention and in convenient foil packets.

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Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs.
In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically,* used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.
Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of th body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of pers allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

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COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION

The 28th AMA Clinical Convention will be held Nov 30-Dec 3 at Memorial Coliseum, Portland, Ore. The program will include scientific general sessions in human sexuality, hypertension, obesity, and total parenteral nutrition; postgraduate courses in tumor chemotherapy, pulmonary function, blood gases, infectious diseases and antibiotics, basic and advanced electrocardiography, pediatric emergencies, office gynecology, and immunology; scientific exhibits of fractures, live teaching clinics, and cardiopulmonary resuscitation; and film symposia. Special activities will provide postgraduate courses in public speaking and writing for scientific journals. Conferences being sponsored are the 16th National Conference on the Medical Aspects of Sports and a Medical Services Conference.

Contact: American Medical Association, 535 N Dearborn St, Chicago 60610.

TEXAS ACADEMY OF FAMILY PHYSICIANS

The Silver Anniversary meeting of Texas Academy of Family Physicians will convene Nov 10 at Moody Center in Galveston, and continue through Nov 13. The program is being presented in cooperation with The University of Texas Medical Branch at Galveston and will consist of large group sessions at Moody Center and small group sessions on campus running simultaneously. The Annual Sinks McLarty Memorial Lecture on "immunology for the family physician" will be presented by Dr. Philip Thorek of Chicago. This is Dr. Thorek's 25th successive year to speak to the Academy. Keynote speaker will be Dr. Herbert Holden of California, president of the American Academy of Family Physicians.

Contact: Donald Jackson, Texas Academy of Family Physicians, 1905 N Lamar Blvd, Austin 78705, Exec Dir.

CURRENT MEETINGS IN TEXAS

THE UNIVERSITY OF TEXAS M D ANDERSON HOSPITAL AND TUMOR INSTITUTE will present "Cancer Chemotherapy: Fundamental Concepts and Recent Advances" at its 19th annual clinical conference Nov 7-9 at the Shamrock Hilton Hotel, Houston. Approximately one-half of the conference's sessions will be devoted to fundamental concepts of cancer chemotherapy and important new drugs. The remaining half of the program will review major types of cancers that respond to chemotherapy and summarize important advances in new drugs, drug combinations, adjuvant chemotherapy and the immunological aspects of chemotherapy. For additional information, contact: Mrs. Jane H Brandenberger, The University of Texas Institutions at Houston, Texas Medical Center, Houston 77025, Info Coord.

AMERICAN ASSOCIATION FOR RESPIRATORY THERAPY has scheduled its 20th annual meeting Nov 22-27 in Dallas. Among the program topics to be offered are heart and lung as a physiologic unit; lung water in acute respiratory distress syndrome; patterns of ventilation and their effect on cardiopulmonary physiology; intermittent mandatory ventilation; electrolytes as related to blood gases; recognition of respiratory problems through intelligent use of monitors; aerosols: deposition and clearance; and evolution of respirators due to crisis. Five continuing education courses are being sponsored in addition to round table discussions and workshops. Contact: Winfield Singletary, 7411 Hines Pl, Dallas 75235, Exec Off.

For other courses and symposiums, see Continuing Education Courses, pp 31-32.

BAYLOR LAW REVIEW will present a symposium on "Death with Dignity" Nov 8, at Roxy Grove Hall in the Waco Hall Complex, corner of South 7th and James, Waco. The symposium will offer physicians, attorneys, and members of the general public the opportunity to hear and participate in discussions on modern life sustaining techniques; death: when does it occur; physician's legal liability, civil and criminal; dealing with death—the patient and the family; and the physician's dilemma. These discussions will be led by men who have achieved state-wide and national recognition in their respective professions. For more information, contact Baylor Law Review, PO Box 6262, Waco 76706, or State Bar of Texas, PO Box 12487, Capitol Station, Austin 78711.

AMERICAN HEART ASSOCIATION will present reports on the latest developments in basic and clinical research and advances in patient care by medical scientists from many nations at its 47th annual scientific sessions in Dallas Nov 18-21. About 600 research papers covering a wide range of interests will be presented in simultaneous sessions at the Dallas Convention Center. Additionally invited experts will deliver lectures and participate in symposia, and there will be film showings and exhibits. Also scheduled are postgraduate seminars, and about two dozen "how to" sessions where physicians can meet informally with medical authorities. Contact: William W Moore, 44 E 23rd St, New York 10010, Exec Off.

TEXAS GOVERNOR'S CONFERENCE ON ARTHRITIS will be presented Oct 31-Nov 1, 1974, at the Sheraton-Crest Inn, Austin. Speakers featured on the program are: State Rep Carlos Truan, chairman of House Committee on Human Relations; State Sen Bob Gammage, chairman of Public Health and Welfare Sub-committee; Mr. Joe Christie, Texas State Insurance Commissioner; US Congressman Bob Eckhardt; Mr. Dan Button, president, National Arthritis Foundation; Mr. Ray Miller, executive news director, KPRC, Houston; US Congressman Charles Wilson; Dr Ed W Schmidt, president, Texas Medical Association; Mr. David K Ferguson, director, Texas Regional Medical Programs; Dr. James Peavy, commissioner of health, Texas State Department of Health; Mr. Ted Norris, president, SAMA; and Dr. Morris Ziff, chief, rheumatic diseases unit, The University of Texas Health Science Center at Dallas. Registration fee: $5.00 Contact: Dr. Homer Goehrs, Austin Diagnostic Clinic, 801 W 34th St, Austin 78701.

TEXAS NURSING HOME ASSOCIATION is sponsoring its 24th Annual Convention at the Shamrock Hilton Hotel, Houston, Nov 20-22. William P. Hobby, Lieutenant Governor of Texas, will be the featured speaker for the kick-off luncheon. Continuing education courses offered on the program include the HEW philosophy on patient care; a business approach to behavioral management; influencing human behavior; and control of losses through personnel selection. For more information, contact: Sidney D Rich, 6225 US Highway 290E, Austin 78723, Exec V-Pres.

UNIVERSITY OF TEXAS SCHOOL OF ARCHITECTURE graduate program in community and regional planning is sponsoring an interdisciplinary conference entitled "Designing a Humane Environment, The Human Response to Physical Space" Nov 1 at the Joe C Thompson Conference Center in Austin. The conference, limited to 50 participants, will focus on community planning and the physical setting of health care institutions in relation to the mental well-being of patients. Basic questions to be discussed include: How does physical space influence our behavior? Has our built environment made us sick? Should we examine the room before we examine the patient? Conference leader is Dr. Aristides Esser, psychiatrist and architect. He is associated with the Rockland County State Hospital, New York, and is president of ASMER, American Synergistics Man and Environment Relations. The fee for the meeting is $40. Contact: Reynell Parkins, PhD, The University of Texas School of Architecture, Austin 78712.

LEUKEMIA SOCIETY OF AMERICA will sponsor a medical symposium Nov 13 at St. Paul Hospital, Fort Worth. Featured speaker for the meeting will be Dr. E J Freireich, M D Anderson Hospital and Tumor Institute, Houston, who will speak on recent advances in the management of leukemia and potential for curability. A round table discussion on problems in leukemia will be held during the afternoon session. Contact: W J Thomas, 1309 Main, Dallas 75202, Exec Dir.

CURRENT NATIONAL MEETINGS

SOUTHERN MEDICAL ASSOCIATION's 68th Annual Scientific Meeting will present the theme, "what is being done for the physician past middle age to assure him and his patients that he is abreast of all modern scientific and technical aspects of medicine?" Nov 17-20 in Atlanta. The sessions will stress the importance of continuing education for the physician, young and old. Contact: Robert F Butts, 2601 Highland Ave, Birmingham 35210, Exec Dir.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS will conduct its 17th Annual Scientific Meeting and Workshop in New Orleans at the Fairmont-Roosevelt Hotel, Nov 5-10. The workshop will precede the annual meeting and have basic, intermediate, and advanced sections and feature small group instruction. The meeting program will include lectures, symposia, and panel discussions. Registration fees: $20 prior to Oct 15; $30 after that date. Contact: American Society of Clinical Hypnosis, 800 Washington Ave SE, Minneapolis, Minn 55414.

AMERICAN COLLEGE OF CHEST PHYSICIANS' 40th Annual Scientific Assembly will present the theme, "Meeting Tomorrow's Clinical Needs Today" at Rivergate Exhibition Center, New Orleans, Nov 3-7. The program will feature five days of workshops, symposia, fireside conferences, and the presentation of original investigations. Also highlighting the meeting are medical motion pictures, luncheon panels, evening seminars, and tutorial sessions. Registration fee for nonmembers, $65. Contact: Bradford W Claxton, M Ed, Continuing Education, American College of Chest Physicians, 911 Busse Highway, Park Ridge, Ill 60068, Dir.

AMERICAN ASSOCIATION OF GYNECOLOGICAL LAPAROSCOPISTS will present its 1974 symposium of gynecologic endoscopy at the Disneyland Hotel, Anaheim, Calif, Nov 21-25. The program will include workshops on basic and advanced laparoscopy, hysteroscopy, culdoscopy, fetoscopy, and nurses and paramedics training. In addition, there will be general sessions, closed circuit TV and audiovisual presentations of films, slides, panels, and operative care, as well as scientific and commercial exhibits, round table discussions, and an opportunity to "meet the experts." Registration fee: $150. Contact: Dr. Jordan M Phillips, 11239 S Lakewood Blvd, Downey, Calif 90241.

AMERICAN MEDICAL ASSOCIATION's Council on Health Manpower will sponsor its Second National Congress on Health Manpower Oct 31-Nov 2, 1974, at the Palmer House, Chicago. Purpose of the Congress is to assess the adequacy of health manpower supply nationally, in terms of gross numerical projections; to assess the distribution of physicians between medical specialties, and recommend methods and incentives to achieve needed apportionment of physicians in such specialties; to assess the impact of foreign medical graduates on the adequacy, availability and distribution of health services and to make recommendations as to any changes which may be indicated in national policy; and to describe methodology and make recommendations as to ways in which communities or planning areas can quantify their particular health manpower shortages and act to ameliorate such shortages. Registration fee: $55. Contact: Dept of Health Manpower, American Medical Association, 535 N Dearborn St, Chicago 60610.

AMERICAN COLLEGE OF PHYSICIANS will sponsor a three-day postgraduate course entitled "Innovations in the Diagnosis and Management of Acute Myocardial Infarction" Oct 30-Nov 1, 1974, at Jefferson Medical College, Philadelphia, Pa. Purpose of the course is to give specialists in internal medicine and related fields an opportunity to review basic information and to find out what is new in a particular area of interest. Computer analysis, coronary bypass surgery, intermediate cardiac care, drug treatment, and active rehabilitation of the patient will be discussed. Contact: Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine St, Philadelphia 19104.

Calendar of Listings

■ Denotes Texas Meetings

NOVEMBER

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, San Francisco, Nov 16-19, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN ASSOCIATION OF BLOOD BANKS, Anaheim, Nov 9-14, 1974. Ms. Lois James, 1828 L St NW, Washington, DC 20036, Exec Sec.

■ AMERICAN ASSOCIATION FOR RESPIRATORY THERAPY, Dallas, Nov 22-27, 1974. Winfield Singletary, 7411 Hines Pl, Dallas 75235, Exec Off.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, Washington, DC, Nov 4-6, 1974. Arthur E Auer, 241 E Saginaw, East Lansing, Mich 48823, Exec Dir.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, San Francisco, Nov 20-22, 1974. Creston C Herold, 30 N Michigan Ave, Chicago 60602, Exec Dir.

AMERICAN DENTAL ASSOCIATION, Washington, DC, Nov 10-14, 1974. C Gordon Watson, 211 E Chicago Ave, Chicago 60611, Exec Dir.

AMERICAN SOCIETY OF CYTOLOGY, New York, Nov 6-9, 1974. Dr. Warren R Lang, Health Sciences Center, 130 S 9th St, Suite 1006, Philadelphia 19105, Sec-treas.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, Chicago, Nov 10-14, 1974. Dr. John A D Cooper, One Dupont Circle, NW, Washington, DC 20036, Pres.

INTERNATIONAL COLLEGE OF SURGEONS, Portland, Ore., Nov, 1974. Dr. Virgil T DeVault, 1516 Lake Shore Dr, Chicago 60601, Exec Off.

MEDICAL SOCIETY OF THE US AND MEXICO, Guadalajara, Mex, Nov 6-10, 1974. Mrs. Virginia E Bryant, 333 W Thomas, No 207, Phoenix, Ariz 85013, Exec Sec.

■ TEXAS MEDICAL ASSOCIATION, House of Delegates, Austin, Nov 2-3, 1974. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Dir.

■ TEXAS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Houston, Nov 1-2, 1974. Dr. Bert A DeBord, Scott and White Clinic, Temple 76501, Sec.

WEST COAST ACUPUNCTURE RESEARCH INSTITUTE, Beverly Hills, Nov 16-18, 1974. Dr. Herman V Platt, 8907 Wilshire Blvd, Beverly Hills, Calif 90211, Med Dir.

DECEMBER

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec 4-7, 1974. Mrs. Betty Suor, 1116 S 5th, Tacoma, Wash 98405, Exec Sec.

AMERICAN ACADEMY OF PSYCHOANALYSIS, Kingston, Jamaica, Dec 5-8, 1974. Dr. Joseph Barnett, 8 E 77th St, New York 11029.

■ AMERICAN COLLEGE OF PHYSICIANS, Galveston, Dec 6-7, 1974. Dr. Robert A Hettig, Baylor University College of Medicine, 1200 M D Anderson Blvd, Houston 77025.

AMERICAN MEDICAL ASSOCIATION, Portland, Ore, Dec 1-4, 1974. Dr. Ernest B Howard, 535 N Dearborn St, Chicago 60610, Exec VPres.

■ AMERICAN MEDICAL WOMEN'S ASSOCIATION, Houston, Dec 1-3, 1974. Dr. Claudine Moss Gay, 403 E Capitol St, Washington, DC 20003, VPres.

AMERICAN SOCIETY OF HEMATOLOGY, Atlanta, Dec 7-10, 1974. Charles B Slack, 6900 Grove Road, Thorofare, NJ 08086.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Dec 1-6, 1974. Miss Adele Swenson, 713 E Genesee St, Syracuse, NY 13210, Exec Dir.

SOUTHERN SURGICAL ASSOCIATION, Boca Raton, Fla, Dec 9-11, 1974. Dr. W Dean Warren, Emory University, Atlanta 30322, Sec.

■ SOUTHWESTERN GYNECOLOGIC ASSEMBLY, Dallas, Dec 5-7, 1974. Dr. Marvin Gerard, 670 W Arapaho, Suite 2, Richardson 75080, Chrmn.

■ TEXAS ACADEMY OF INTERNAL MEDICINE, Galveston, Dec 5, 1974. Dr. Tom W Duke, PO Box 3460, Amarillo 79106, Sec.

■ TEXAS SOCIETY OF INTERNAL MEDICINE, Galveston, Dec, 1974. Dr. Willis A Seyffert, Jr, 6006 N Mesa, #100, El Paso 79912, Sec-treas.

JANUARY

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, New York City, Jan 26-31, 1975. William Bevan, 1515 Massachusetts Ave, Washington, DC 20005, Exec Off.

■ AMERICAN COLLEGE OF SURGEONS, SOUTH TEXAS CHAPTER, Galveston, Jan 30-Feb 1, 1975. Dr. Peter B Fisher, 615 Medical Twrs, Houston, 77025.

■ TEXAS MEDICAL ASSOCIATION, Austin, Jan 17-19, 1975. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Dir.

■ TEXAS SOCIETY OF PATHOLOGISTS, El Paso, Jan 24-26, 1975. Dr. John A Webb, 704 Medical Towers, Houston 77025, Sec.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, San Diego, Feb 15-19, 1975. James O Kelley, 225 E Michigan St, Milwaukee 53202, Exec Off.

AMERICAN ACADEMY OF FORENSIC SCIENCES, Chicago, David A Crown, Room 3517, State Dept, Washington, DC 20520, Pres.

■ AMERICAN COLLEGE OF CARDIOLOGY, Houston, Feb 10-13, 1975. William D Nelligan, 9650 Rockville Pike, Bethesda 20014, Exec Off.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, Orlando, Fla, Feb 28-Mar 5, 1975. Dr. B F Alfano, 675 Main St, Melrose, Mass 02176, Sec.

■ INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS, San Antonio, Feb 27-28, 1975. S E Cockrell, Jr, 202 W French Pl, San Antonio 78212, Exec Off.

Most of us breathe 12 to 15 times a minute. And never know it. For a million and a half Americans suffering from emphysema, each breath can be a major struggle. Thirty-five million others—men, women and children—are under attack by other respiratory diseases such as asthma, tuberculosis, hay fever, or bronchitis.

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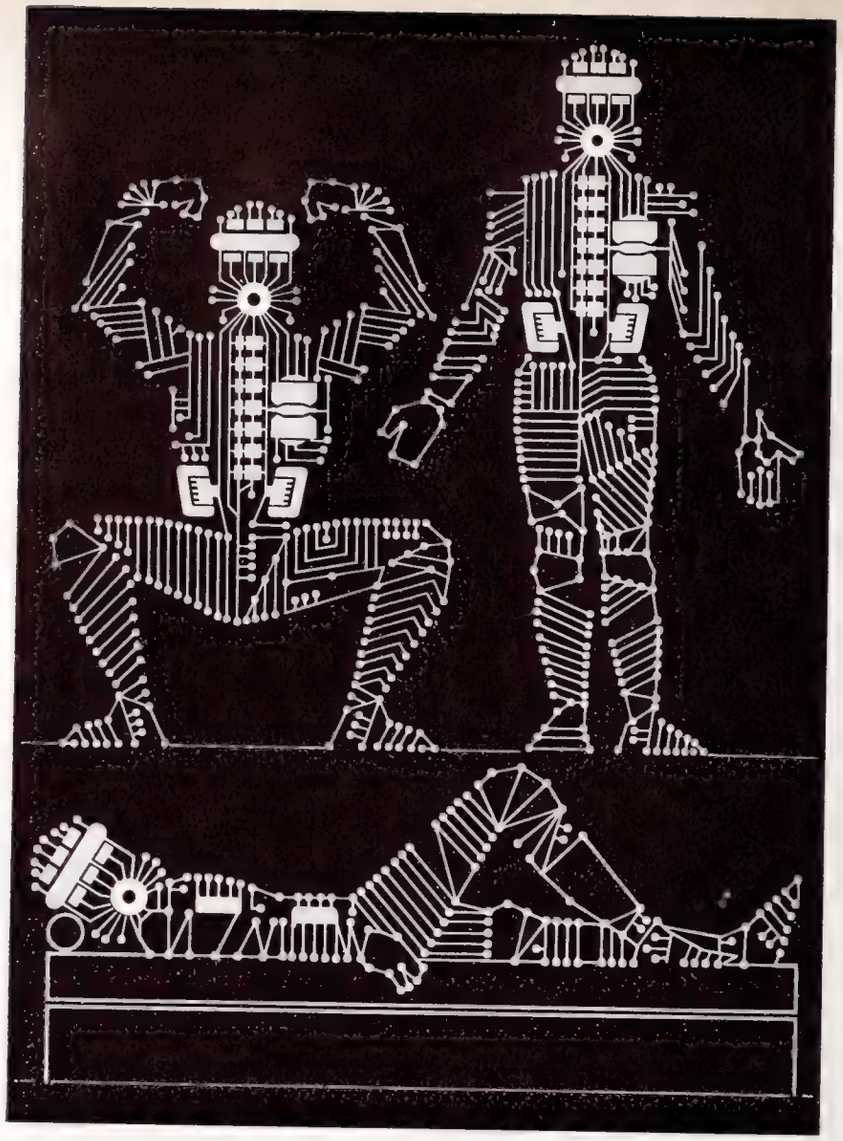
Orthostatic effects are mild and infrequent; normal hemodynamic responses to exercise are not altered



Catapres reduces blood pressure to virtually the same extent in both the lying and standing positions and after exercise (see chart).

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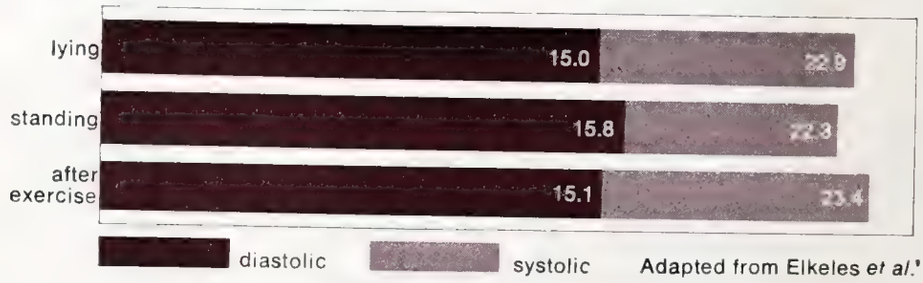

Adapted from Elkeles *et al.*[1]

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Indication: The drug is indicated in the treatment of hypertension. As an antihypertensive drug, Catapres (clonidine hydrochloride) is mild to moderate in potency. It may be employed in a general treatment program with a diuretic and/or other antihypertensive agents as needed for proper patient response.

Warnings: Tolerance may develop in some patients necessitating a reevaluation of therapy.

Usage in Pregnancy: In view of embryotoxic findings in animals, and since information on possible adverse effects in pregnant women is limited to uncontrolled clinical data, the drug is not recommended in women who are or may become pregnant unless the potential benefits outweigh the potential risk to mother and fetus.

Usage in Children: No clinical experience is available with the use of Catapres (clonidine hydrochloride) in children.

Precautions: When discontinuing Catapres (clonidine hydrochloride), reduce the dose gradually over 2 to 4 days to avoid a possible rapid rise in blood pressure and associated subjective symptoms such as nervousness, agitation, and headache. Patients should be instructed not to discontinue therapy without consulting their physician. Rare instances of hypertensive encephalopathy and death have been recorded after cessation of clonidine hydrochloride therapy. A causal relationship has not been established in these cases. It has been demonstrated that an excessive rise in blood pressure, should it occur, can be reversed by resumption of clonidine hydrochloride therapy or by intravenous phentolamine. Patients who engage in potentially hazardous activities, such as operating machinery or driving, should be advised of the sedative effect. This drug may enhance the CNS-depressive effects of alcohol, barbiturates and other sedatives. Like any other agent lowering blood pressure, clonidine hydrochloride should be used with caution in patients with severe coronary insufficiency, recent myocardial infarction, cerebrovascular disease or chronic renal failure.

As an integral part of their overall long-term care, patients treated with Catapres (clonidine hydrochloride) should receive periodic eye examinations. While, except for some dryness of the eyes, no drug-related abnormal ophthalmologic findings have been recorded with Catapres, in several studies the drug produced a dose-dependent increase in the incidence and severity of spontaneously occurring retinal degeneration in albino rats treated for 6 months or longer.

Adverse Reactions: The most common reactions are dry mouth, drowsiness and sedation. Constipation, dizziness, headache, and fatigue have been reported. Generally these effects tend to diminish with continued therapy. The following reactions have been associated with the drug, some of them rarely. (In some instances an exact causal relationship has not been established.) These include: Anorexia, malaise, nausea, vomiting, parotid pain, mild transient abnormalities in liver function tests; one report of possible drug-induced hepatitis without icterus and hyperbilirubinemia in a patient receiving clonidine hydrochloride, chlorthalidone and papaverine hydrochloride.

Weight gain, transient elevation of blood glucose, or serum creatine phosphokinase; congestive heart failure, Raynaud's phenomenon; vivid dreams or nightmares, insomnia, other behavioral changes, nervousness, restlessness, anxiety and mental depression. Also rash, angioneurotic edema, hives, urticaria, thinning of the hair, pruritus not associated with a rash, impotence, urinary retention, increased sensitivity to alcohol, dryness, itching or burning of the eyes, dryness of the nasal mucosa, pallor, gynecomastia, weakly positive Coombs' test, asymptomatic electrocardiographic abnormalities manifested as Wenckebach period or ventricular trigeminy.

Overdosage: Profound hypotension, weakness, somnolence, diminished or absent reflexes and vomiting followed the accidental ingestion of Catapres (clonidine hydrochloride) by several children from 19 months to 5 years of age. Gastric lavage and administration of an analeptic and vasopressor led to complete recovery within 24 hours. Tolazoline in intravenous doses of 10 mg at 30-minute intervals usually abolishes all effects of Catapres (clonidine hydrochloride) overdosage.

How Supplied: Catapres, brand of clonidine hydrochloride, is available as 0.1 mg (tan) and 0.2 mg (orange) oval, single-scored tablets in bottles of 100.

For complete details, please see full prescribing information.
Under license from Boehringer Ingelheim GmbH

Reference: 1. Elkeles, R. S., Goldby, F. S. and Oliver, D. O.: A Double Blind Study of Catapres, A New Hypotensive Agent, *in* Conolly, M E. (ed.): Catapres in Hypertension. London. Butterworths, 1970. pp. 139-144.

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Standard versus experimental surgical procedures in the treatment of duodenal ulcer

James C. Thompson, MD

The standard operative procedures used in this country for complications of duodenal ulcer disease are subtotal gastrectomy, truncal vagotomy plus drainage, and truncal vagotomy plus antrectomy. Since duodenal ulcer disease is associated with hypersecretion of acid, and since vagotomy diminishes acid secretion, vagotomy probably should be included in all operations for duodenal ulcer disease. The new procedure of selective proximal vagotomy without gastric drainage offers great promise. It will not be possible to evaluate definitive recurrence rates for several years; in the meantime, the procedure should be performed only in centers willing to follow patients carefully by meticulous clinical review and periodic acid secretory tests.

The initial development of surgical procedures for peptic ulcer was empirical. Wölfler, a colleague of Billroth in Vienna, first used gastroenterostomy in 1881 to bypass a carcinomatous obstruction of the pylorus. Because of its simplicity and relative safety, the operation was quickly adopted by surgeons in Europe and America as the standard surgical treatment for duodenal ulcer. Lewisohn[47] in 1925 reported on a long-term postoperative study of patients with gastroenterostomy and called attention to a 34% incidence of recurrent gastrojejunal ulcer. Distal gastric resection, first performed by Billroth in 1881 for antral carcinoma, was utilized the next year by von Rydigier for treatment of ulcer disease. By the 1930s, subtotal gastrectomy (resection of the distal 66-75% of the stomach with gastroduodenostomy or gastrojejunostomy) had become popular in this country and was for two decades the standard operative procedure for duodenal ulcer, and is still in wide use.[56]

Dragstedt reasoned that duodenal ulcer disease was associated with increased secretion of acid and that the success of surgical procedures on the stomach was probably related to reduction of acid-secreting potential. Since the vagus was known to stimulate acid secretion, he concluded that vagus section would be beneficial to the treatment of ulcer.[13,14] Many of his patients had difficulty with gastric emptying, and a gastrojejunostomy was later added to the procedure for drainage.

To combine the acid-reducing effects of distal gastric resection with those of vagotomy seemed a logical step, and by the early 1950s, several groups[11,15,17,55] had reported good results with this procedure, which abolished both antral gastrin and vagal stimulation to the parietal cell.

The current standard operative procedures for duodenal ulcer in the United States are subtotal gastrectomy, truncal vagotomy and drainage (either pyloroplasty or gastrojejunostomy), and truncal vagotomy plus antrectomy. There was great resistance among American surgeons to adoption of vagotomy plus drainage. Even today, only on the West Coast is it the most popular procedure for duodenal ulcer. Since duodenal ulcer disease is associated with hypersecretion of acid and since vagotomy will diminish acid secretion, it seems logical to me to include vagotomy in any operation designed to treat duodenal ulcer disease. There are still many surgeons who adhere loyally to the use of subtotal gastrectomy without vagotomy.

In choosing between the other two standard procedures, most popular opinion would hold that the choice is between an operation that is a near-guaranty against ulcer recurrence, with a slightly

higher mortality rate (vagotomy + antrectomy) versus a generally safer operation with a significantly higher rate of ulcer recurrence (vagotomy + drainage). There are several problems in evaluating results of operative treatment: How is it possible to extrapolate mortality rates from master surgeons practicing only gastrointestinal surgery to the average surgeon in this country? How do we evaluate mortality rates in series in which poor-risk patients are excluded? How are we to cope with enthusiastic reports of new operative procedures based upon data obtained less than one year after operation? Finally the central, basic, and most difficult question is: How can morbidity be compared with mortality (for example, in an evaluation equation, how many recurrences are equal to a single death)? These are only a few of the problems, the more attention one gives to evaluation of results, the more problems appear. We will initially consider the standard operative procedures, and then those *selective* vagotomy procedures that have been introduced recently and which are still considered experimental in this country.

Subtotal Gastrectomy

This procedure reduces the acid-secreting capacity of the stomach by excision of the antral gastrin mechanism and by removal of a variable amount of the end-organ, the parietal cell mass. Depending upon the extent of parietal cell resection, subtotal gastrectomy will diminish the maximal gastric secretory response to histamine after operation by 60-80%. Gastrointestinal continuity may be restored by either gastroduodenostomy or gastroenterostomy. If the latter procedure is chosen, it is vital that the distal line of resection is beyond the pylorus, since inclusion of antral mucosa with the duodenal stump results in sequestration of gastrin cells in a permanently alkaline environment. This leads to a syndrome of hypergastrinemia mimicking the Zollinger-Ellison syndrome.[41] Numerous studies have been done in patients with subtotal gastrectomy on the relative superiority of gastroduodenostomy versus gastroenterostomy. The incidence of recurrence of peptic ulcer following subtotal gastrectomy without vagotomy is twice as high with the Billroth I anastomosis as it is with the Billroth II.[59] If vagotomy is added, however, gastroduodenostomy appears to be preferable to gastrojejunostomy.[56] A summary of operative results for all procedures is given in Fig 1.

Truncal Vagotomy Plus Drainage

Division of vagal trunks causes great reduction in acid secretion but also suppresses gastric motility. To combat this stasis, a gastric emptying procedure, either pyloroplasty or gastroenterostomy, is necessary.

The detection of the relatively high incidence of incomplete vagotomy on the Hollander secretory test led to a great emphasis on technique in the performance of vagotomy. It was assumed initially that with great attention to detail, complete vagotomy could be achieved invariably. Because of variations in the anatomy of the vagi at the esophageal hiatus and on the stomach, complete interruption of all vagal fibers is difficult or impossible in some patients. A transthoracic approach to vagotomy is often used after failure of an earlier abdominal vagotomy, but unfortunately this gives slight, if any, improvement in results[12] and is usually not justified. Since gastrin and acetylcholine from the vagus are mutually potentiative in their action at the parietal cell, antrectomy protects against the surgeon's failure to completely excise the vagi; the incidence of positive Hollander tests is much lower after vagotomy and antrectomy than after vagotomy and drainage.[38] Since antrectomy alone may result in a negative Hol-

lander test,[43,54] the entire question of the anatomic significance of insulin testing must be reassessed. As Moore[49] has recently indicated, however, postoperative secretory studies are of far more than academic interest: Kay's group[40] has shown that after truncal vagotomy and drainage, a patient with an early positive Hollander has a 23.1% chance of recurrence, whereas with a negative insulin test, the risk is only 1.6%.

Truncal Vagotomy Plus Antrectomy

In terms of classic gastric physiology, this procedure should abolish the cephalic and gastric phases of acid secretion and should leave the parietal cell mass to be stimulated only by the agent from the intestinal phase. Recent studies of ours and others[5,57] have shown, however, that gastrin levels in man are diminished only slightly by antrectomy, which means that extra-antral sources of gastrin contribute an important portion of circulating levels of the hormones; the physiologic significance, however, of extra-antral gastrin is difficult to assess, and preliminary evidence would suggest that it is slight.

One might consider that truncal vagotomy plus antrectomy would combine the risk of mortality that follows gastric resection with the risk of diarrhea that comes from vagotomy, and that this might interfere with value of the procedure. On the other hand, the amazingly low recurrence rate (Fig 1) has led many surgeons to adopt it as their procedure of choice for complications of duodenal ulcer. With great experience with the operation, it is possible to achieve low (1.6%) mortality rates.[27] Antrectomy usually involves excision of about the distal 40% of the stomach. If a Billroth I anastomosis is used, normal duodenal mechanisms for suppression of acid secretion are preserved.[4]

The current choice that faces most American surgeons operating on patients with duodenal ulcer is between truncal vagotomy with drainage and truncal vago-

1. Operative results.

Procedure	Investigators	Number of patients	Duration of study	% Mortality	% Recurrence	% Negative Hollander	% Dumping	% Diarrhea	% Clinical grading Visick (58) I and II
Subtotal gastrectomy	Goligher et al (21)	107	5-8 yr	0[a]	(5)[b];2				94
	Howard et al (31)	80	> 2 yr	0	5		26	15	
	Postlethwait (50)	346	5 yr	1.8	3.7		12	17.1	89.7
Truncal vagotomy + drainage	Eisenberg et al (16)	455[c]	1-10 yr	1[d];1.85[e]	3.6				
	Goligher et al (21)[f]	119	5-8 yr	0[a]	(10)[b];7				89
	Jordan and Condon (38)[h]	108	2-5 yr	2	(3)[b];8	50		19[i];5[k]	
	Kennedy et al (40)	547[g]		0.5	3.3	80	2	27	92
	Postlethwait (50)[f,h]	337	5 yr	0.6	6.2		12	20.7	83
Truncal vagotomy + antrectomy	Goligher et al (21)	116	5-8 yr	0[a]	(6)[b];2				92
	Herrington et al (27)	3,584	1-25 yr	1.6	0.6		25[m]	1	94
	Jordan and Condon (38)	92	2-5 yr	0[a]	0	87		16[i];5[k]	
	Postlethwait (50)	331	5 yr	0.9	0.7		17.2	21.5	89.2
Selective vagotomy + drainage	Amdrup and Jensen (3)	100	5 yr	0	6	79	34	1	85
	Humphrey and Wilkinson (32)	67	1-2 yr				25	19	64
Selective proximal vagotomy	Grassi et al (23)[n]	79	2-4 yr	0	1.2	97	0	0	97
	Hedenstedt et al (26)[p]	131	0.5-3 yr	0	2.3	94		0	
		732	1-7 yr	0.7[d];2.2[s]	0.7	70			89
	Holle et al (30)[r]	62	3-10 mo	0		80	0		97
	Imperati et al (33)[n]	350	< 45 mo	0	< 1	44[t]	6	3	V I 62
	Johnston et al (34)[n]	35	0.3-1 yr	0	0	59[u]	10	3	97
	Jordan (36)								

a: poor risks excluded
b: suspected
c: 91% pyloroplasty; 9% gastroenterostomy
d: elective
e: emergency
f: gastroenterostomy
g: 246 pyloroplasty; 301 gastroenterostomy
h: pyloroplasty
i: at 1 year
k: at 5 years
m: mild
n: without drainage
p: mostly without drainage
r: with drainage
s: overall
t: from reference #35
u: at 6 months

tomy with antrectomy. Several attempts have been made to select between vagotomy plus antrectomy and vagotomy plus pyloroplasty on the basis of preoperative secretory studies[6,45] (*inter alia*). The rationale would be to treat patients with severe hypersecretion by vagotomy and antrectomy and those with mild hypersecretion by vagotomy and drainage. Although there is logic in utilizing vagotomy and antrectomy in patients with extreme hypersecretion, ulcer recurrence is much more closely linked to the persistence of vagal innervation than to preoperative secretory activity.

Carefully planned *prospective* studies with random assignment of surgical procedures are necessary in order to obtain valid data for comparison. Three such studies have been reported.[1,38,50] Goligher and colleagues in Leeds and York followed 342 male duodenal ulcer patients for five to eight years after either a standard subtotal gastrectomy, vagotomy and antrectomy, or vagotomy and gastroenterostomy. There were no deaths, but high-risk patients were excluded. The recurrence rate was 7% for vagotomy and gastroenterostomy, 2% for vagotomy and antrectomy, and 2% for subtotal gastrectomy. In a companion study, they found that patients with vagotomy and pyloroplasty had a recurrence rate nearly twice that of patients with vagotomy and gastroenterostomy.[22]

The results from a cooperative study involving 1,357 male duodenal ulcer patients operated and followed for five years at Veterans Administration hospitals were remarkably similar, except that the mortality rate was 0.9% for vagotomy and antrectomy, 1.8% for subtotal gastrectomy, and 0.6% for vagotomy and drainage.[50] The recurrence rate was 6.2% after vagotomy and drainage, 0.7% after vagotomy and antrectomy, and 3.7% after subtotal gastrectomy. In a previous study on the same group of patients,[51] postgastrectomy symptoms occurred in about 10% of the patients with the two resective procedures and 6% of the patients with vagotomy and drainage. It was concluded that the severity of postgastrectomy symptoms (except for diarrhea) was related in a linear fashion to the amount of stomach removed. Two hundred patients at the Houston VA Hospital were randomly assigned either vagotomy and drainage or vagotomy and antrectomy, with the proviso that any patient who had a badly scarred duodenum would be treated by vagotomy and drainage.[38] The recurrence rate was 10% for vagotomy and drainage and none for vagotomy and antrectomy. Postoperative secretory studies for various vagotomy procedures are shown in Fig 2.

2. *Effect of surgical procedures on gastric acid secretion.*

Procedure	Investigators	Number of Patients	BAO: % Reduction	MAO: % Reduction
Vagotomy + gastrojejunostomy	Gillespie et al (19)	23	95	79
Vagotomy + pyloroplasty	Jordan and Condon (38)	108	87	76
Vagotomy + antrectomy	Jordan and Condon (38)	92	99	95
Selective vagotomy + drainage	Kronborg and Madsen (46)	30	84	96
Selective proximal vagotomy + pyloroplasty	Miller et al (48)	25	39	50
Selective proximal vagotomy without pyloroplasty	Amdrup and Jensen (2)	22	80	60
	Imperati et al (33)	62	81	69
	Johnston et al (34)	54	80	55
	Jordan (36)	35	74	62
	Kronborg and Madsen (46)	30	83	89

Several points need to be considered in interpreting these studies. As Goligher[20] has cautioned, gastric resection is followed by more catabolic ill effects, such as weight loss and anemia, than is vagotomy and drainage. Furthermore, the fact that there were no deaths in the original series should be interpreted in view of the preselection of cases to avoid patients with high operative risks. It is important to make the following assumption, which I believe to be a fair one: Widespread usage by the general population of surgeons would be associated with a mortality rate of about 1% in vagotomy and drainage procedures, and of at least 2% in vagotomy and antrectomy.[12] This then returns the problem of evaluation to the metaphysical and ultimately unanswerable question: How many ulcer recurrences are equal to one death?

Although experience is not uniform, there appear to be specific indications for vagotomy and drainage procedures. It seems warranted to advocate this operation in uncomplicated instances of perforated duodenal ulcer. More importantly, widespread adoption of vagotomy, pyloroplasty, and suture ligation of bleeding duodenal ulcer would probably lead to a diminution in the frightening mortality rate that is associated with the emergency operations for bleeding. Foster and associates[18] reported a mortality rate of 30% for gastric resection and emergency treatment of bleeding gastroduodenal ulcers; after adoption of vagotomy and pyloroplasty for bleeding peptic ulcers, mortality fell to 9%. The high mortality rate associated with resection was especially evident in older patients. Review of mortality rates after vagotomy, pyloroplasty, and suture ligation for the treatment of bleeding duodenal ulcer, reveals some as low as 2-3% and others as high as 12%, coupled with instances of rebleeding as high as 25%.[56]

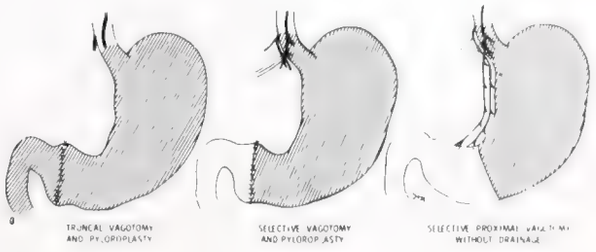
Experimental Procedures

Since only the stomach need be denervated for treatment of peptic ulcer disease and since vagal denervation of the rest of the abdominal viscera has been blamed for diarrhea and for an increased incidence of gallstones, techniques have been developed for selective vagal denervation of the stomach with preservation of the hepatic branch of the anterior vagus and of the celiac branch of the posterior trunk.[24] A further extension of the concept of selective vagotomy was the suggestion by Holle[28] and by Amdrup and Griffith[1] that denervation should be limited to the proximal stomach (the parietal cell mass) with preservation of the innervation of the antrum (Fig 3). The procedure for selective denervation of the entire stomach has been called selective gastric vagotomy. The procedure for selective vagotomy of the acid-secreting fundus has a multitude of names: highly selective vagotomy, parietal cell vagotomy, proximal gastric vagotomy, proximal selective vagotomy, supraselective vagotomy, *inter alia*.[60] I will call it selective proximal vagotomy.

Selective Vagotomy

Because selective gastric vagotomy denervates the antrum, the procedure is accompanied by stasis unless an emptying procedure is performed.[9] Metabolic studies on patients subjected to selective and truncal vagotomy have failed to demonstrate significant differences in the incidence of diarrhea or the excretion of fat or nitrogen or in the function of the gallbladder or small bowel.[39,42] An unexpected dividend of the procedure is that complete vagal denervation of the stomach is more easily achieved than with truncal vagot-

3. Three types of vagotomy in current use for treatment of duodenal ulcer disease. Truncal vagotomy and selective vagotomy result in denervation of the antrum and require drainage (pyloroplasty). Selective proximal vagotomy results in denervation of the acid-secreting fundus, but preserves innervation to the antral musculature. Shaded areas denote extent of denervation.



omy;[39,52] careful follow-up studies, however, show that there is little or no clinical superiority between selective and truncal vagotomy.[3]

Selective Proximal Vagotomy (Fig 4)

Because of its tremendously attractive physiologic basis and because of the encouragement provided by early operative results (Fig 1), there is great current enthusiasm about selective proximal vagotomy, and it has been said that evidence for the procedure is "so strong already that we should all turn now to this new operation."[7] Review of early preliminary results certainly makes that hyperbole understandable if not yet advisable. Mortality rates are extremely low and clinical results are good to excellent. Dumping and diarrhea have been nearly eliminated. The diminution of acid secretion after operation, although not as great as with other procedures, appears adequate (Fig 2). It is troublesome, however, that the incidence of positive Hollander tests increases sharply with time,[35] and this may portend future recurrences. Kronborg and Madsen[46] found 20 out of 30 patients had a positive Hollander response after proximal selective vagotomy. Recurrences, in all reported studies, are very low but the longest follow-up is 45 months and many series report patients operated upon only two and three months prior to publication.

4. Technique of selective proximal vagotomy. Fundic branches of the gastric divisions of the anterior and posterior vagi are severed along the lesser curvature and around the fundo-esophageal junction at the angle of His. The antral branches of the descending vagal nerves of Latarjet are preserved.

Because the antral musculature remains innervated, most surgeons perform selective proximal vagotomy without drainage. Is it safe to leave an innervated antrum in continuity without doing a pyloroplasty? Fear of gastric retention led Holle[29] to add an emptying procedure routinely to selective proximal vagotomy. Early development of recurrent ulcers[25,61] has led to speculation about the need for gastric drainage. The preponderance of reports[10,23,33,34,36,37] denies evidence of gastric stasis. We (and others) are engaged in a carefully controlled prospective random trial to test the necessity of drainage with selective proximal vagotomy.

Although higher gastrin response to food had been reported after selective proximal vagotomy,[44] we have found no difference in the postoperative gastrin response to food between patients with and without vagotomy (Fig 5).

Has the new millenium arrived? It will take a while to know. It took 30 years for surgeons and gastroenterologists to become aware of the high incidence of recurrent ulcers after gastrojejunostomy.[47] Kay and colleagues[40] report 90% good-to-excellent results after truncal vagotomy and drainage with a low (0.5%) mortality rate. Since these results are so good, the authors suggest that newer selective procedures can "at most be expected to give marginal advantages which can be expected to accrue only after surgeons had acquired the necessary technical expertise."[40] Similar cautionary notes have been made by others.[8,23,53] In the meantime, it is important that the procedure of proximal selective vagotomy be limited to those centers that are willing to follow patients carefully by meticulous clinical review and with periodic acid secretory tests so that

it may be possible to avoid disasters that have followed so often with changing fads of ulcer surgery.

Addendum

Since this article was submitted, I have learned of a report (Kronborg O, Madsen P: Highly selective vagotomy versus selective vagotomy and pyloroplasty in the treatment of duodenal ulcer. A controlled, randomized trial. Unpublished data) which provides further justification for caution. The authors report 11 instances of recurrent or persisting duodenal ulcers in 50 patients with proximal selective vagotomy followed 1-4 years. Three recurrences healed spontaneously but this still resulted in a recurrence rate of 16% in a relatively short period. The great variability of published results with the new operation confirms the need for careful study before adopting new operative procedures for duodenal ulcer.

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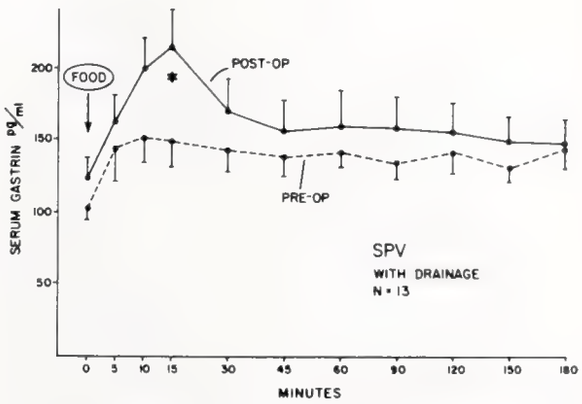
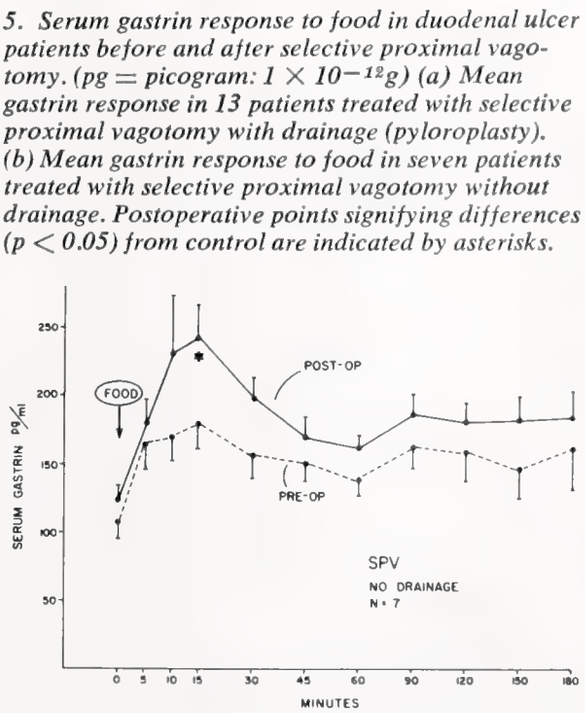


5. Serum gastrin response to food in duodenal ulcer patients before and after selective proximal vagotomy. (pg = picogram: 1×10^{-12}g) (a) Mean gastrin response in 13 patients treated with selective proximal vagotomy with drainage (pyloroplasty). (b) Mean gastrin response to food in seven patients treated with selective proximal vagotomy without drainage. Postoperative points signifying differences ($p < 0.05$) from control are indicated by asterisks.



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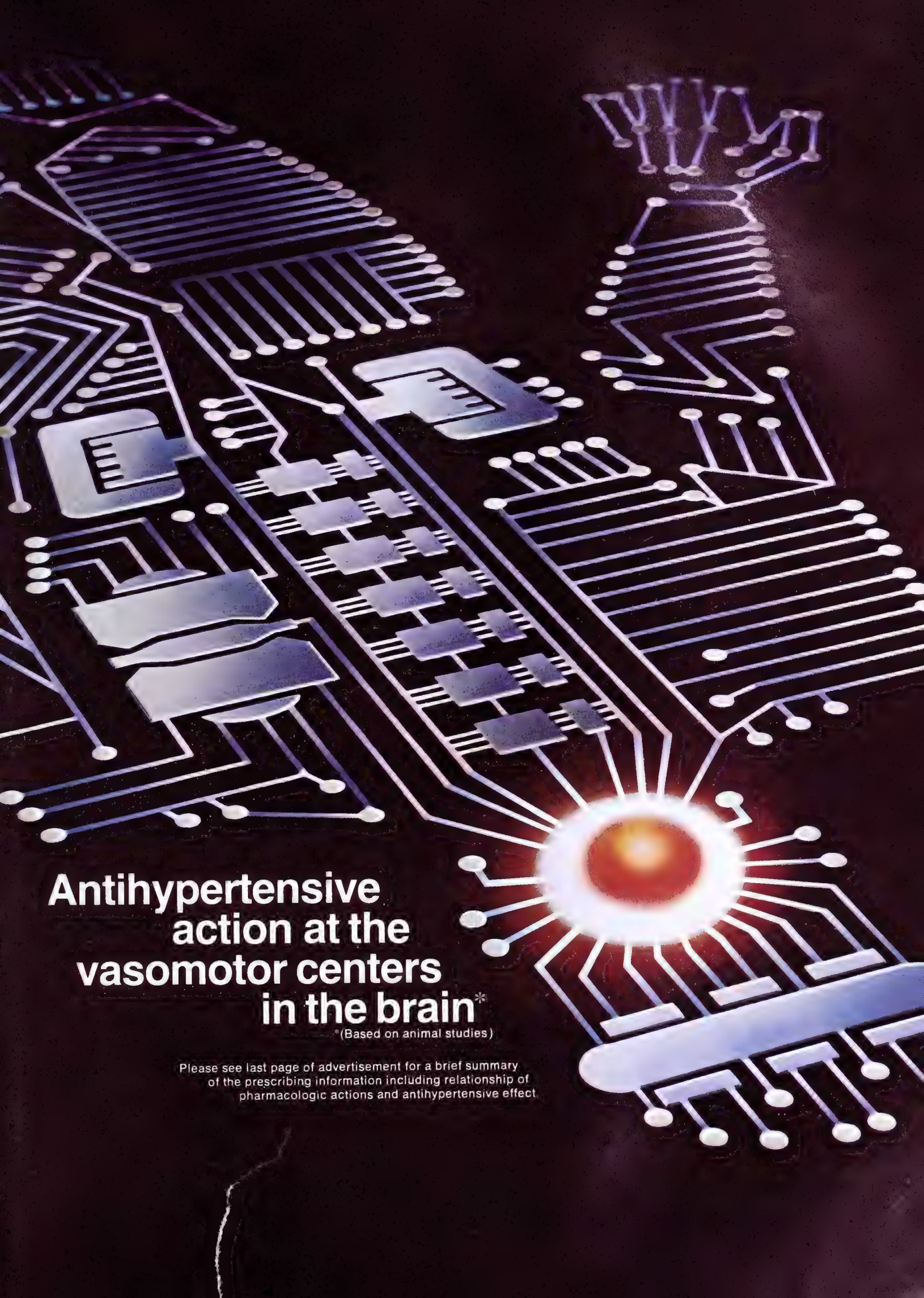


Antihypertensive action at the vasomotor centers in the brain*

*(Based on animal studies)

Please see last page of advertisement for a brief summary of the prescribing information including relationship of pharmacologic actions and antihypertensive effect.

Now... antihypertensive action at the vasomotor centers in the brain

new

Catapres®

Tablets of 0.1 and 0.2 mg

(clonidine hydrochloride)

Central action:

Catapres appears to lower blood pressure through central alpha-adrenergic stimulation, as shown in animal studies. This results in diminution—but not blocking—of sympathetic outflow from cardio-accelerator and vasoconstrictor centers in the medulla.

Not a "depleter"

Not a "blocker"

Not an "inhibitor"

Not a "false transmitter"

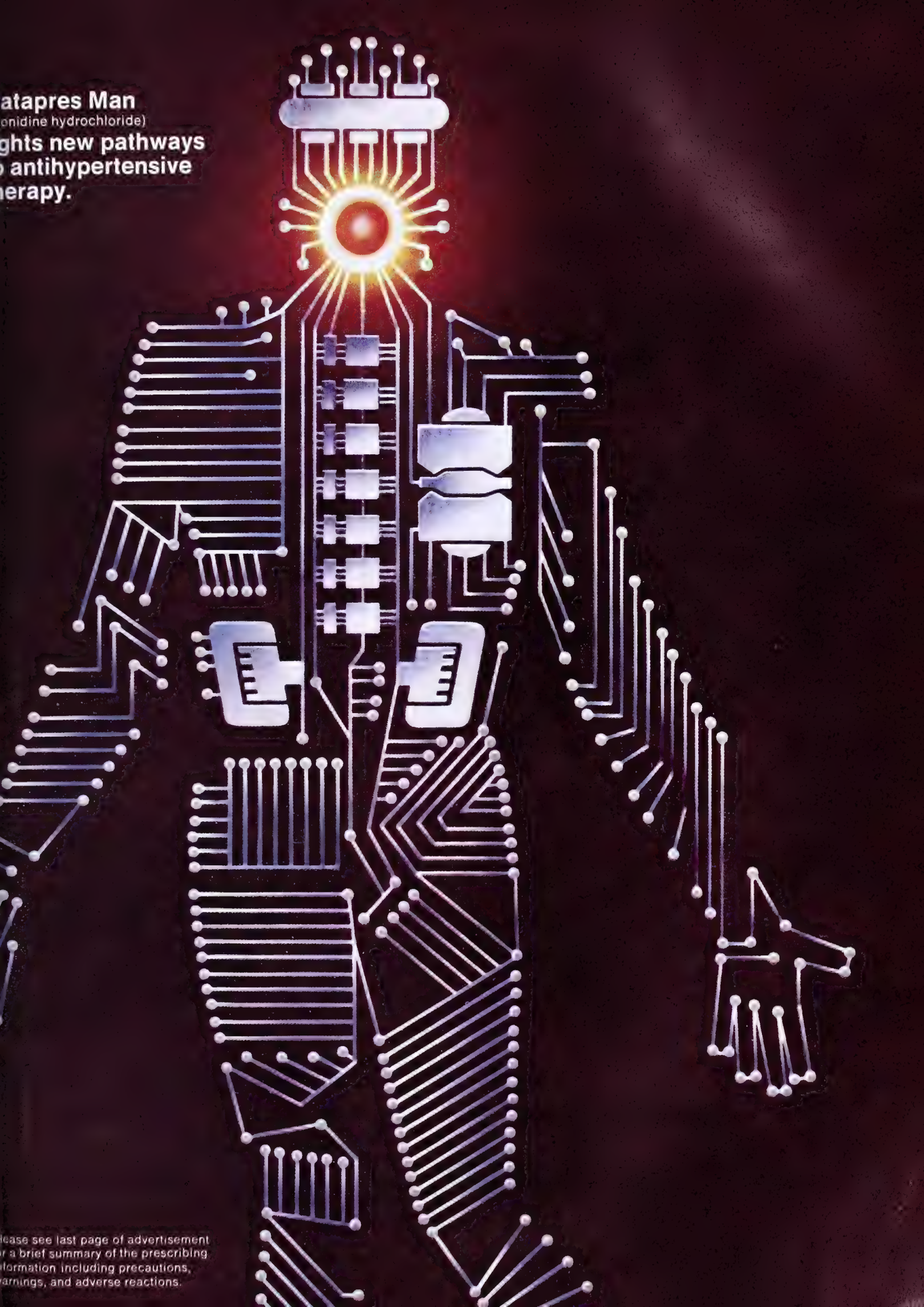
Effective in hypertension, mild to severe

Mild and infrequent orthostatic hypotension

Normal hemodynamic responses to exercise are unaffected

Renal blood flow and glomerular filtration rate essentially unchanged

Mild to moderate potency


atapres Man
onidine hydrochloride)
ghts new pathways
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new Catapres
(clonidine hydrochloride)

Effective in hypertension mild to severe

Catapres is distinguished by its broad clinical usefulnes in the treatment of hypertension.

More than 600 major published papers*

The extensive experimental and clinical work with Catapr has been reported in hundreds of papers published in scientific journals in this country and abroad. Controlled studies[1-7] plus numerous other clinical evaluations have demonstrated that Catapres is an effective antihypertensive drug with these desirable properties:

does not alter normal hemodynamic responses to exerci

renal blood flow and glomerular filtration rate essentiall unchanged

antihypertensive response enhanced by diuretics such chlorthalidone

compatible with other antihypertensive agents

has been shown to reduce plasma renin activity and to decrease excretion of aldosterone and catecholamines
(See ACTIONS section of Brief Summary)

What to watch for— The principal side effects of Catapres are dry mouth, sedation, and drowsiness. Constipation, dizziness, headach and fatigue also have been reported. Generally, these effects tend to diminish with continued therapy. As with other antihypertensive agent tolerance may develop in some instances. For a more detailed discus sion of side effects, warnings, and precautions, see the brief summa of prescribing information on the last page of this advertisement or consult the Catapres package insert.

*Complete Catapres bibliography available on request.

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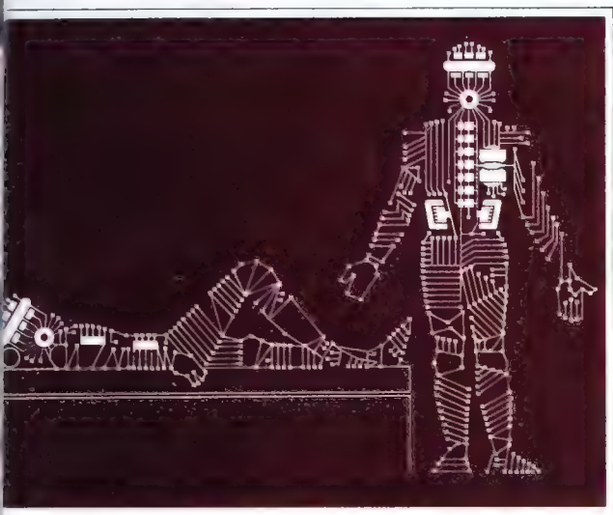
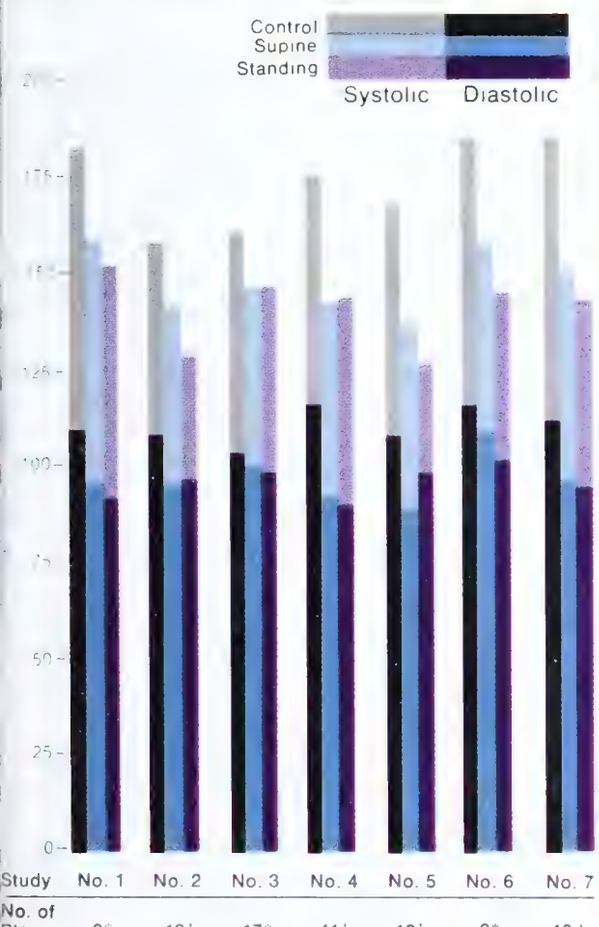
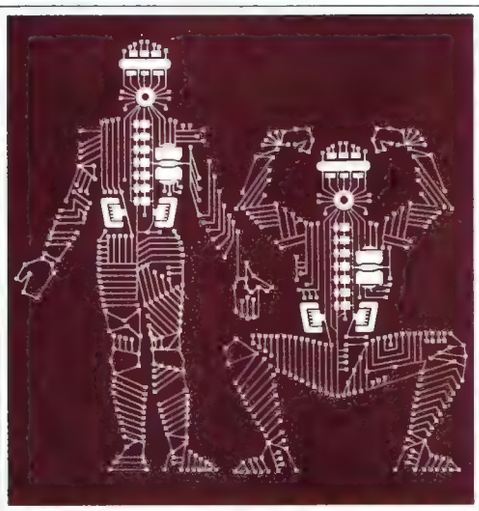


anding and supine blood pressure sponse at the conclusion of therapy in controlled studies[1-7]

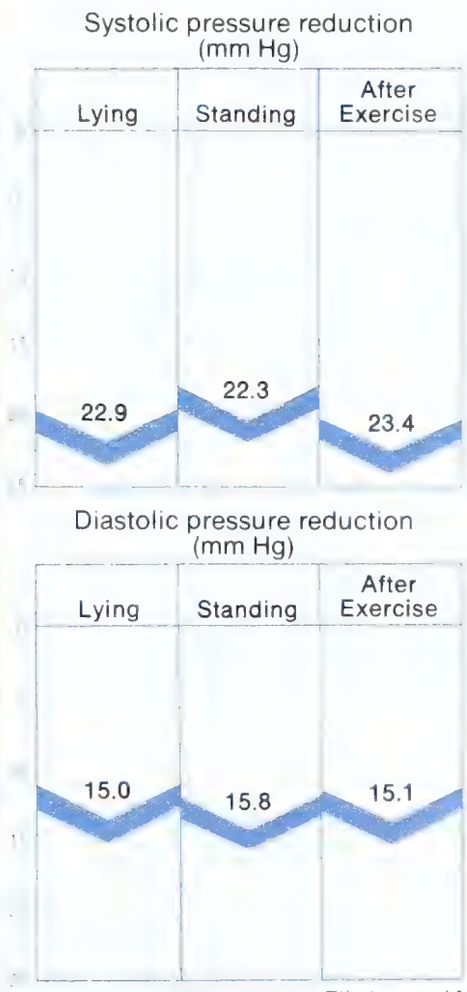


* Received Catapres alone.
† Received Catapres + a diuretic.
Note: In study No.4, blood pressure was taken in the sitting rather than the supine position.

Normal hemodynamic responses to exercise not altered

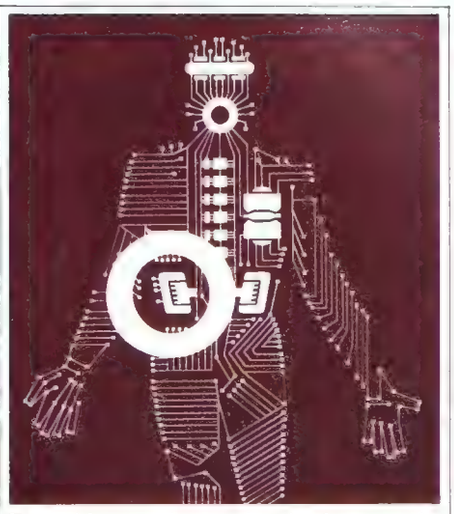


Mean blood pressure reductions in 9 hypertensive patients receiving Catapres (0.15 mg daily) for 4 weeks

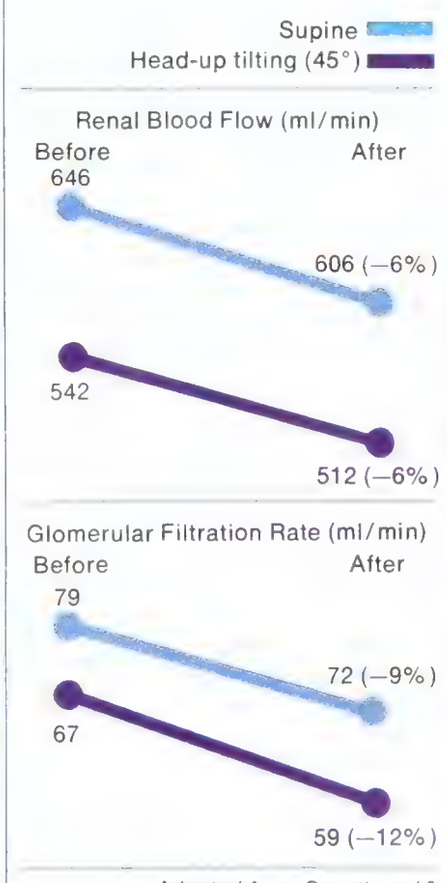


Adapted from Elkeles *et al.*[1]

Renal blood flow and glomerular filtration rate essentially unchanged

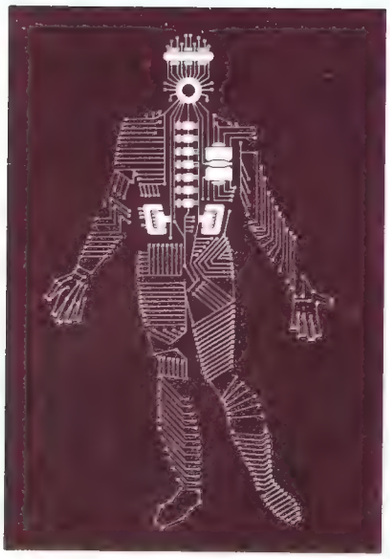


Renal hemodynamics before and after Catapres in 7 hypertensive patients. Mean blood pressure reductions were significant in both the supine position (from 155 to 128 mm Hg) and the standing position (from 151 to 101 mm Hg).



Adapted from Onesti *et al.*[8]

New from Boehringer Ingelheim



new Catapres®
(clonidine hydrochloride)

It's easy to start with Catapres. The usual starting dose of Catapres is one 0.1 mg tablet twice daily. Increments of 0.1 to 0.2 mg per day (up to the maximum daily dose of 2.4 mg) may be made until the desired blood pressure response is achieved.

How to stop Catapres. Reduce the dose gradually over two to four days to avoid a possible rapid rise in blood pressure and associated subjective symptoms such as nervousness, agitation, and headache. Patients on Catapres should be instructed not to discontinue therapy without consulting their physician. It has been demonstrated that a rapid rise in blood pressure, should it occur, can be reversed by resumption of Catapres or by administration of intravenous phentolamine.

Catapres®
(clonidine hydrochloride)
Tablets of 0.1 mg and 0.2 mg

Actions: The mechanism of action appears to be central alpha-adrenergic stimulation as demonstrated in animal studies. This results in inhibition of bulbar sympathetic cardioaccelerator and sympathetic vasoconstrictor centers, thereby decreasing sympathetic outflow from the brain. Other studies in humans have provided evidence of a reduction in plasma renin activity and the excretion of aldosterone and catecholamines. The exact relationship between these pharmacologic actions of Catapres (clonidine hydrochloride) in humans and its antihypertensive effect has not been fully elucidated at this time.

Indication: The drug is indicated in the treatment of hypertension. As an antihypertensive drug, Catapres (clonidine hydrochloride) is mild to moderate in potency. It may be employed in a general treatment program with a diuretic and/or other antihypertensive agents as needed for proper patient response.

Warnings: Tolerance may develop in some patients necessitating a reevaluation of therapy.
Usage in Pregnancy: In view of embryotoxic findings in animals, and since information on possible adverse effects in pregnant women is limited to uncontrolled clinical data, the drug is not recommended in women who are or may become pregnant unless the potential benefits outweigh the potential risk to mother and fetus.
Usage in Children: No clinical experience is available with the use of Catapres (clonidine hydrochloride) in children.

Precautions: When discontinuing Catapres (clonidine hydrochloride), reduce the dose gradually over 2 to 4 days to avoid a possible rapid rise in blood pressure and associated subjective symptoms such as nervousness, agitation, and headache. Patients should be instructed not to discontinue therapy without consulting their physician. Rare instances of hypertensive encephalopathy and death have been recorded after cessation of clonidine hydrochloride therapy. A causal relationship has not been established in these cases. It has been demonstrated that an excessive rise in blood pressure, should it occur, can be reversed by resumption of clonidine hydrochloride therapy or by intravenous phentolamine. Patients who engage in potentially hazardous activities, such as operating machinery or driving, should be advised of the sedative effect. This drug may enhance the CNS-depressive effects of alcohol, barbiturates and other sedatives. Like any other agent lowering blood pressure, clonidine hydrochloride should be used with caution in patients with severe coronary insufficiency, recent myocardial infarction, cerebrovascular disease or chronic renal failure.

As an integral part of their overall long-term care, patients treated with Catapres (clonidine hydrochloride) should receive periodic eye examinations. While, except for some dryness of the eyes, no drug-related abnormal ophthalmologic findings have been recorded with Catapres (clonidine hydrochloride), in several studies the drug produced a dose-dependent increase in the incidence and severity of spontaneously occurring retinal degeneration in albino rats treated for 6 months or longer.

Adverse Reactions: The most common reactions are dry mouth, drowsiness and sedation. Constipation, dizziness, headache, and fatigue have been reported. Generally these effects tend to diminish with continued therapy. The following reactions have been associated with the drug, some of them rarely. (In some instances an exact causal relationship has not been established.) These include: Anorexia, malaise, nausea, vomiting, parotid pain, mild transient abnormalities in liver function tests; one report of possible drug-induced hepatitis without icterus and hyperbilirubinemia in a patient receiving clonidine hydrochloride, chlorthalidone, and papaverine hydrochloride. Weight gain, transient elevation of blood glucose, or serum creatine phosphokinase; congestive heart failure, Raynaud's phenomenon; vivid dreams or nightmares, insomnia, other behavioral changes, nervousness, restlessness, anxiety and mental depression. Also rash, angioneurotic edema, hives, urticaria, thinning of the hair, pruritus not associated with a rash, impotence, urinary retention, increased sensitivity to alcohol, dryness, itching or burning of the eyes, dryness of the nasal mucosa, pallor, gynecomastia, weakly positive Coombs' test, asymptomatic electrocardiographic abnormalities manifested as Wenckebach period or ventricular trigeminy.
Overdosage: Profound hypotension, weakness, somnolence, diminished or absent reflexes and vomiting followed the accidental ingestion of Catapres (clonidine hydrochloride) by several children from 19 months to 5 years of age. Gastric lavage and administration of an analeptic and vasopressor led to complete recovery within 24 hours. Tolazoline in intravenous doses of 10 mg at 30-minute intervals usually abolishes all effects of Catapres (clonidine hydrochloride) overdosage.

How Supplied: Catapres, brand of clonidine hydrochloride, is available as 0.1 mg (tan) and 0.2 mg (orange) oval, single-scored tablets in bottles of 100.

For complete details, please see full prescribing information.

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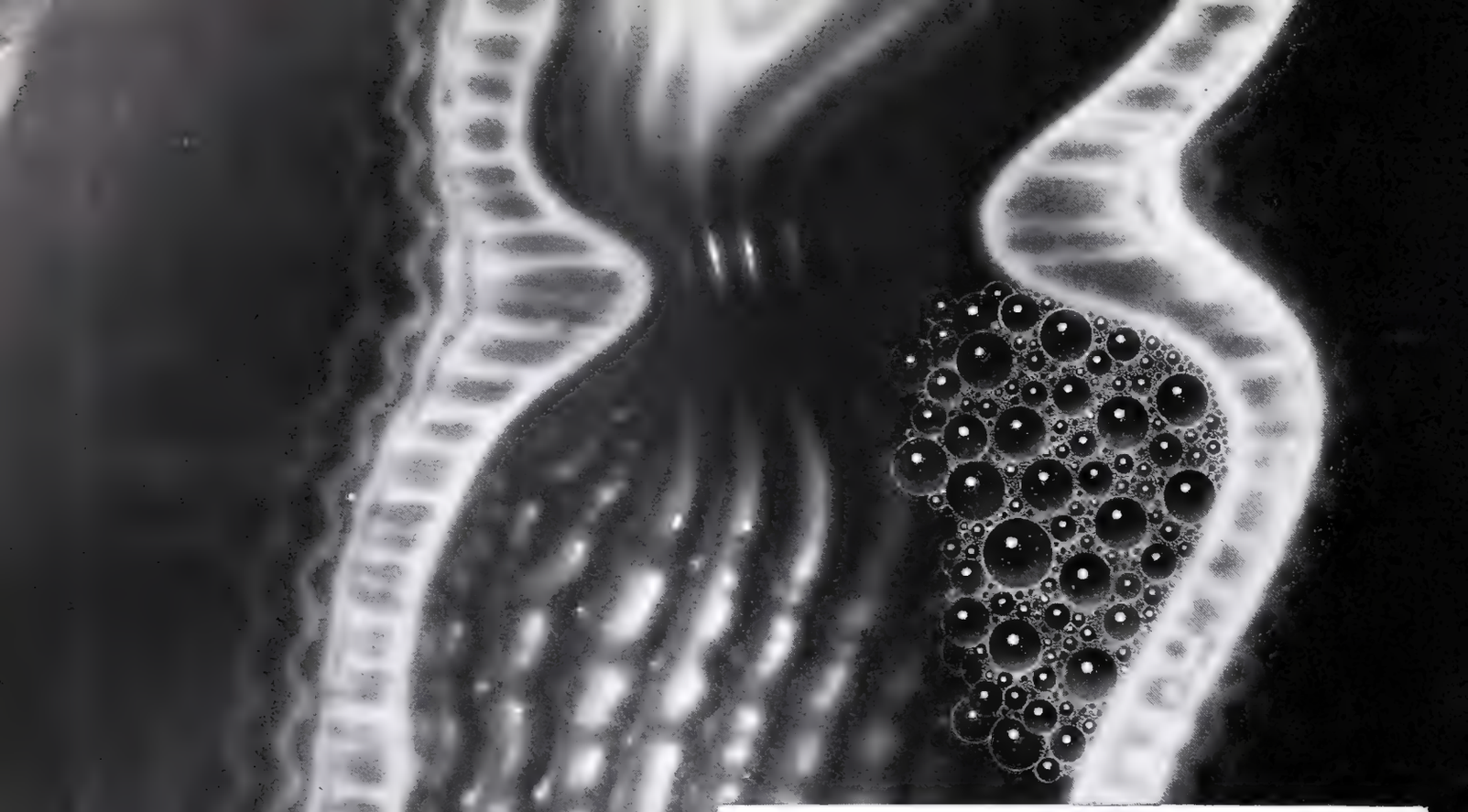

Entrapped gas...

Silent partner of GI spasm

Painful GI spasm in the presence of entrapped gas causes even more pain and more discomfort. Yet, while spasm is relieved, entrapped gas often goes untreated.

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Sidonna. The therapeutic partnership approach to functional or organic GI disturbances including spastic colon, irritable bowel syndrome, gastroenteritis, gastritis, peptic ulcer and nervous indigestion.

Contraindications: hypersensitivity to barbiturates or belladonna alkaloids; glaucoma, prostatic hypertrophy, pyloric obstruction. **Side Effects:** dry mouth, blurred vision, dysuria, skin rash, constipation or drowsiness. **Dosage:** one or two tablets preferably before meals and at bedtime.

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Each scored tablet contains: specially activated simethicone 25 mg., hyoscyamine sulfate 0.1037 mg., atropine sulfate 0.0194 mg., hyoscine hydrobromide 0.0065 mg. (equivalent to belladonna alkaloids [as bases] 0.1049 mg.) and butabarbital sodium N.F. 16 mg. (Warning: may be habit forming.)

A working partnership against the pain of gas and spasm

Excessive axillary sweating

Robert L. Sewell, MD

A little-known technique for the surgical correction of excessive axillary sweating is presented.

In 1957, Hurley and Shelly accidentally found that removal of a central segment of the axillary skin would decrease, or even eliminate, excessive sweating from the axilla.

They recounted their experiences in a brief report in 1963,[1] but the procedure never became popular and, in fact, is scarcely known in this country.

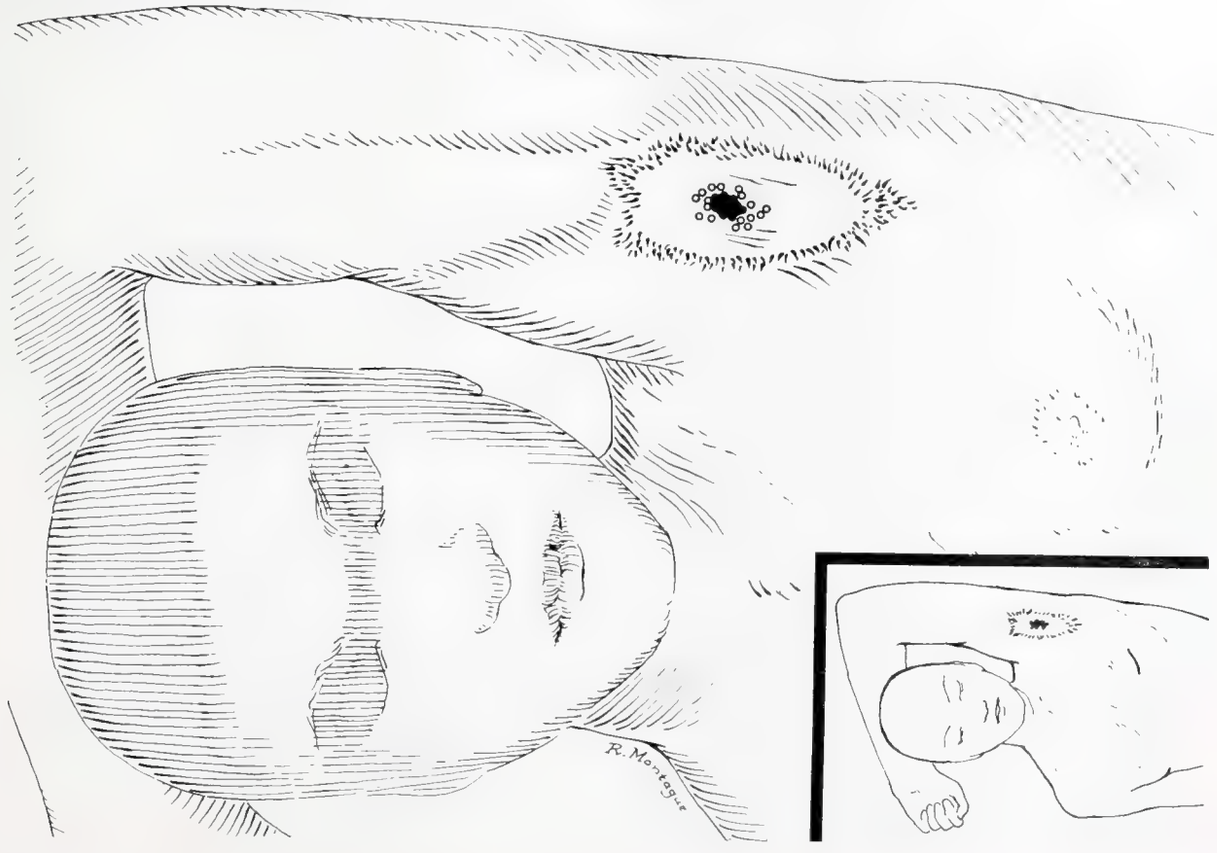
They also reported in a British publication[2] in 1966 and, for equally obscure reasons, the procedure gained fairly wide professional acceptance there.

This article suggests a modification which eliminates the occasional healing difficulties encountered. In short, the exact areas of the eccrine gland distribution in the axilla are identified by the starch-iodine technique and only these areas are excised.

There are two types of sweat glands in the axilla: The eccrine glands, although they are small, produce the clear, watery secretion. The apocrine glands, which are about ten times as large, produce a thicker, milky secretion which is responsible for the characteristic odor of bromidrosis.

Oddly enough, the eccrine glands in the axilla are only slightly more numerous than in other areas of the body, but they will

1. The area of perspiration formed by the eccrine glands in the axilla is always a random pattern, not necessarily the same on the two sides. The only constant feature is an area of about 1 cm in diameter in the absolute pit of the axilla. As shown in the sketch, there are numerous smaller aggregations of eccrine glands which may or may not be connected with the constant central one.



"trigger" to heat and emotion, but not particularly to autonomic nervous system stimuli.

The traditional approach[3] involves the removal of a 2 by 4 cm segment from the apex of the axilla. However, surgeons in Denmark[4] remove much larger segments, necessitating a Z-plasty to close.

The use of starch-iodine to identify the central area of sweating was first suggested by Weaver in a letter to the *British Medical Journal* in 1970.

This procedure can be much more valuable if the axilla is inspected closely during the time of the first appearance of the sweat. One will observe a random pattern of appearance usually with multiple islands, usually not confluent. These are marked rapidly with a sharp instrument before the sweat begins to coalesce and run, thus obliterating the pattern of origin. These segments are then excised with double elliptical incisions averaging about 1 by 2 cm, undermined, and then sutured. Healing has never been a problem using this method, in contrast to the difficulties encountered in removing the larger strips.

Ordinarily two or three segments are removed at a time, using only local infiltration of anesthesia, as an office procedure. No dressing is used. One repeat examination will identify the remaining smaller islands for excision. Pain and scarring are minimal.

The results in four cases during a period of two to ten years have all been excellent both cosmetically and functionally.

This is a simple, entirely physiological procedure which is greatly appreciated by the patient. It is surprising that it is relatively unknown in this country.

References

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Dr. Robert L. Sewell, The Fort Worth Clinic, 1221 West Lancaster Ave, Fort Worth, Texas 76102.

Laser surgery in otolaryngology

M. Stuart Strong, MD

The conventional management of certain problems in otolaryngology has been either inconvenient or ineffective. In an attempt to identify the advantages and limitations of laser surgery, 175 cases have been treated with the continuous-wave carbon dioxide laser.

It has been found that the carbon dioxide laser provides a practical method of tissue ablation or excision which can be carried out with excellent control. The laser beam is directed with a hand piece in the oral cavity, with the surgical microscopic laser attachment in the nose and pharynx, and with the endoscope-bronchoscope assembly in the tracheobronchial tree.

Laser surgery appears to be most valuable when precise surgery is needed to preserve function.

During the past 2½ years the continuous-wave carbon dioxide laser has been used in treating 175 patients with lesions in the head and neck; 355 procedures were carried out. A large majority of the lesions were in the larynx.

By reviewing this experience we can now identify situations where the use of the surgical laser is likely to be of advantage to the patient.

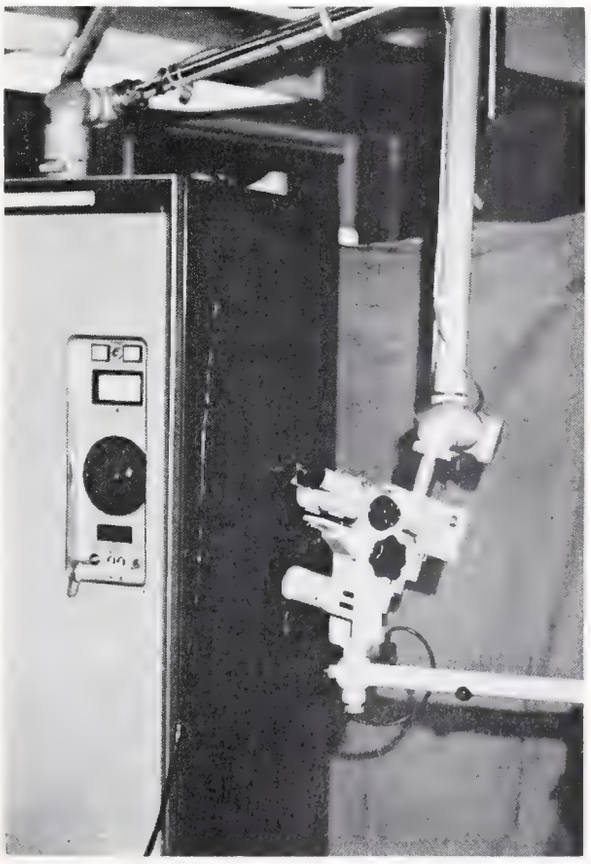
Carbon Dioxide Laser

A surgical laser was developed by the American Optical Corporation Laser Research Laboratories[1] and became available for surgical research in 1969. Although the instrument now in use is a prototype, it is as much at home in the operating room as in the laboratory (Fig 1). Electrical power is provided by the ordinary operating room outlet and a flow of tap water is used to keep the laser tube cool.

The carbon dioxide laser beam has a wave length of 10.6$_\mu$ in the infra-red region; its effect on tissue is purely thermal and produces no ionization. At this wave length, the energy is almost completely absorbed by all biologic tissues irrespective of pigmentation. The amount of tissue destruction is in part proportional to its water content.

The laser beam can be used to vaporize predetermined volumes of tissue in a precisely controlled fashion by using an appropriate amount of energy. A control knob sets the power level of the beam and a foot-switch controlled interval timer operates the shutter allowing the beam to impact on the target area for an appropriate period. For precise microsurgery, a power setting of 15 w is commonly combined with a time

1. The 50 w, carbon dioxide laser with the micromanipulator attached to the surgical microscope.



exposure of one-fifth of a second; for gross dissection 15-25 w of power may be used quasi-continuously in the manual mode, bypassing the timer, using the foot switch to start and stop the dissection. In contrast to pulsed lasers, the continuous-wave carbon dioxide laser has comparatively little impact-shock effect, so that it has minimal tendency to scatter soft tissue.

Methods of Delivery

The collimated beam that emerges from the articulated arm is unfocused and has a diameter of about 10 mm. Using lenses of appropriate focal length, this beam may be focused to a spot size of 0.5-2.0 mm.

For work on easily accessible areas such as the floor of the mouth, a *hand lens* with a focal length of 14 cm is available. The hand piece can be gas autoclaved and the articulated arm can be covered with a sterile stockinette prior to surgery, if asepsis is required.

The *micro-manipulator laser attachment for the surgical microscope* delivers the laser beam to inaccessible areas, provided the target area can be viewed through the microscope. When the microscope and the laser attachment have been fitted with a 400 mm focal length front lens, the beam can be directed to the pharynx and larynx with precise visual control[2] (Fig 2).

The microscope attachment is provided with an aiming light so that the invisible laser beam can be kept on the target area. The control stick on the attachment is coupled via a seven-to-one reduction lever to the laser beam aiming mirror; this mechanism provides micro-manipulation of the laser beam across the target area with exquisite precision.[3]

A standard ventilating bronchoscope can now be fitted to the endoscope laser attachment; this allows the focusing of the beam on lesions in the trachea and main stem bronchi under continuous monocular vision and two-power magnification.

Clinical Application

Oral Cavity

Areas of recurrent leukoplakia, superficial carcinoma, and papilloma have been excised from the lip, floor of the mouth, tongue, and buccal mucosa using a hand piece to direct the beam (Fig 3).

If the histology of the lesion is already known, the lesion is vaporized quickly using the beam continuously under footswitch control. When a lesion has not been biopsied, its perimeter is outlined with the laser; the lesion is then transfixed with a traction suture and excised with the laser at the desired depth. Bleeding is absent unless vessels of 0.5 mm or more has been transected. Often these vessels can be sealed by defocusing the beam, although occasionally a ligature is required.

The laser wound in the oral cavity heals in two to three weeks depending on its diameter. There is no visible postoperative edema and pain is minimal. The absence of contracture at the site of the healed wound is striking in the floor of the mouth and on the buccal mucosa.

Nose and Sinuses

Localized lesions of the anterior nasal cavity, nasal vestibule and nasal septum (eg, recurrent squamous papilloma, inverted papilloma, hereditary telangiectasia, and adenoid-cystic carcinoma) have been excised successfully with the laser.

The anterior nasal cavity is exposed with retractors and the mucosa shrunken with vasoconstrictors. The laser beam is then directed, with the microscope laser attachment, to the lesions. On the septum, dissection can be carried down to the perichondrium, when necessary, without exposing the cartilage. With larger lesions, a lateral rhinotomy is performed to provide adequate exposure.

Bleeding is well controlled by the laser

so that the lesion can be excised precisely. Inaccessible areas of telangiectasis in the depths of the nasal cavity cannot be excised with the laser. Healing of the mucosal defects is prompt, and the contralateral mucoperichondrium remains intact. Prolonged follow-up will be necessary to determine whether or not the disease will recur in the excised areas.

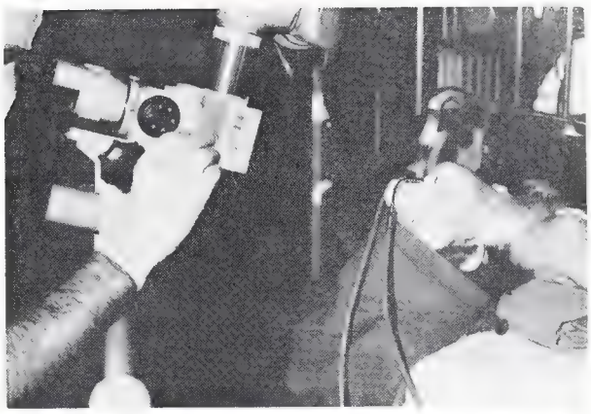
Pharynx and Nasopharynx

After the pharynx has been exposed with a suitable mouth gag under general anesthesia, the micro-manipulator on the surgical microscope is used to direct the laser beam to lesions of the soft palate, tonsil fossa, and posterior pharyngeal wall. A suction catheter is placed in the nasopharynx to keep the area free of steam and smoke. Recurrent papillomas and early carcinoma have been readily excised; healing has been prompt without visible contracture of the scar.

The nasopharynx is viewed indirectly in a 2 cm stainless steel mirror while the soft palate is being retracted forward with a soft rubber catheter passed through the nose. The same mirror could be used to reflect and aim the laser beam precisely onto targets on the dorsum of the soft palate (eg, papillomas) and in the roof of the nasopharynx (eg, recurrent adenoids) (Fig 4). Bloodless tissue destruction is carried out with excellent control and without fear of damage to adjacent structures such as the eustachian tube orifice.

Larynx

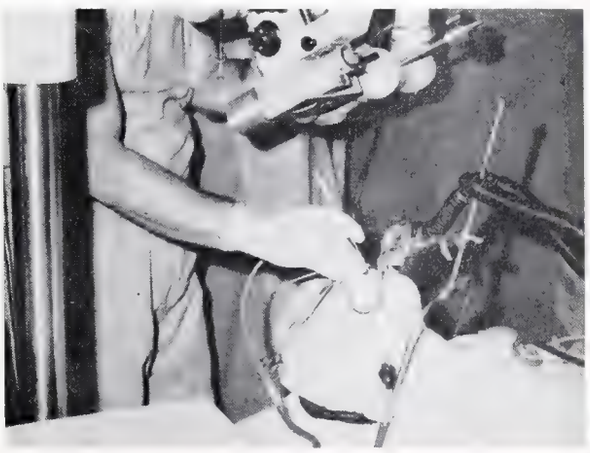
Vocal cord nodules, polyps, cysts, granulomas, papillomas, keratoses, carcinoma-in-situ, and localized carcinoma have been excised successfully with the laser. Prior to laser excision, the larynx is exposed with a suitable suspension laryngoscope (eg, Jako-Pilling laryngoscope) under general



2. The micro-manipulator on the surgical microscope in use while excising papillomas of the vocal cord.

3. A hand piece is being used to destroy an area of leukoplakia of the tongue.

4. The micro-manipulator is being used with a hand-held mirror in the pharynx to direct the beam into a mass of recurrent adenoids.



anesthesia and viewed with the surgical microscope.

The laser beam is directed onto the laryngeal lesion with the micro-manipulator laser attachment on the microscope. If the histology of the lesion is already known (eg, papilloma), the lesion is systematically vaporized; if it has not been identified by biopsy examination, the lesion is put on tension with a cup forceps and is excised at the desired depth. The entire specimen is then available for histologic study.

Lesions in all parts of the larynx can be excised with the laser provided they can be satisfactorily exposed with a suspension laryngoscope; lesions extending 5 to 10 mm below the cord can be excised if retraction of the cord produces adequate exposure. Lesions as small as a 1 mm vocal cord nodule can be shaved off at the edge of the cord without exposing the muscle or elastic fibers of the cord.

Trachea

The endoscopic laser attachment is coupled to a standard ventilating bronchoscope and used to excise multiple recurrent papillomas from the peristomal area of the trachea, the carina, and main stem bronchi (Fig 5).

Standard 3.5 mm x 30 cm, 4.0 mm x 30 cm, and 5.0 mm x 30 cm bronchoscopes are fitted to the endoscope attachment; this apparatus brings the laser beam to a point focus at the tip of the bronchoscope. Controlled destruction of the lesion by vaporization is carried out, and as elimination of the lesion nears completion the perichondrium can be seen through the two-power magnifying system. Steam and smoke caused by vaporization is carried away by the tidal flow of anesthetic gases.

This application of the laser may prove to be useful for other lesions of the trachea, eg adenoma, or for palliation of carcinoma causing obstruction at the carina.

Skin

Recurrent papillomas, nevi, and keloids have been excised with the laser. Healing has been prompt, but in the case of keloids the tendency for further keloid formation does not appear to be less than after conventional surgical excision.

Advantages of Laser Surgery

Excellent *visibility* usually is possible if steam and smoke are appropriately evacuated; no knife or probe is actually in contact with the tissue as dissection proceeds. When the microscope attachment or endoscope is used, the magnification provided increases the visual control.

Hemostasis is virtually complete unless a vessel of 0.5 mm or greater is transected; if the bleeding can be controlled momentarily by pressure, the beam can be used to seal slightly larger vessels. This form of hemostasis is much more effective against an artery than a venous channel. If the wound becomes inundated with blood, the blood must be removed before dissection can proceed since the energy of the laser radiation would be totally dissipated in vaporizing the blood!

Laser radiation can be used for systematic *tissue destruction* or for *biopsy excision.* The lack of tissue distortion is an advantage to the pathologist because the specimen is surrounded by a layer of unwanted heat coagulation of only 50-100μ depending on the power and time setting used during the dissection. Laser excision is characterized by *minimal postoperative edema.* This is probably because of the sharp line of demarcation between the areas of vaporization and the remaining tissues and the minimal layer of unwanted heat coagulation.

The laser-induced wounds are relatively *pain free* unless they become infected, and they *heal rapidly* by epithelial migration across the surface. *Minimal scarring and*

contracture are found in the healed laser wound.

Limitations of Laser Surgery

The target *lesion must be clearly visible* at all times. The lesion may be viewed in a stainless steel mirror if necessary and excised with the laser, but the mirror must be kept free of steam and smoke.

In laser surgery the *operative field must be dry*. Presence of blood, cerebrospinal fluid, saliva, etc would make it impossible to proceed with tissue destruction until they have been removed.

All biologic tissues are susceptible to laser destruction, but their susceptibility is mainly dependent on their water content; this phenomenon makes it possible to observe the progress of dissection from one tissue to another, eg, from mucosa to muscle. *Dissection of bone is tedious* with these energy intensities.

Precautions

Because there is a possibility that the laser beam could impinge on a flat metal surface and by chance be reflected as a focused beam, *the operating room personnel should wear ordinary glasses* to protect their corneas. For the same reason the patients' eyes should be taped shut.

Soft tissue cannot be made to support combustion even when it is destroyed by the laser beam in an atmosphere of oxygen; care must be exercised, however, to *avoid damage to the rubber or plastic endotracheal tube* if it is situated close to the operative site. In the presence of 100% oxygen, such a tube could be made to burn. A thin metal coating such as aluminum tape, will protect the tube from an accidental laser impaction.

Conclusions

Carbon dioxide laser surgery is a practical method of tissue destruction which can be used for tissue ablation or excision. Laser surgery in otolaryngology is most likely to reach its full potential when: (1) the lesion can be fully seen; (2) precise surgery is needed to preserve function; (3) postoperative edema might be a cause of respiratory embarrassment; (4) postoperative scarring might be a cause of dysfunction; or (5) bleeding from friable or vascular lesions would make their precise removal difficult.

A few of the applications of laser surgery have been identified, but many more await recognition; only then will the role of laser surgery in otolaryngology be defined.

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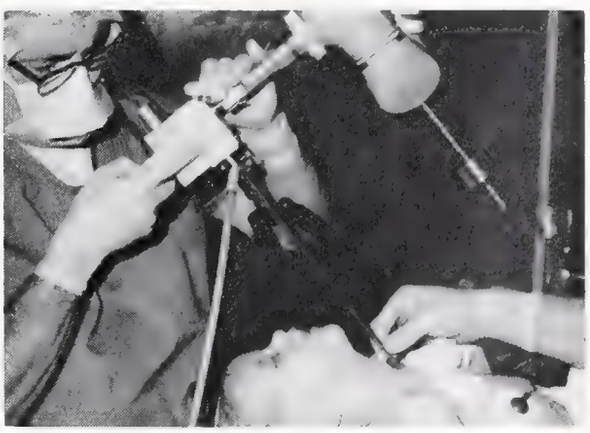
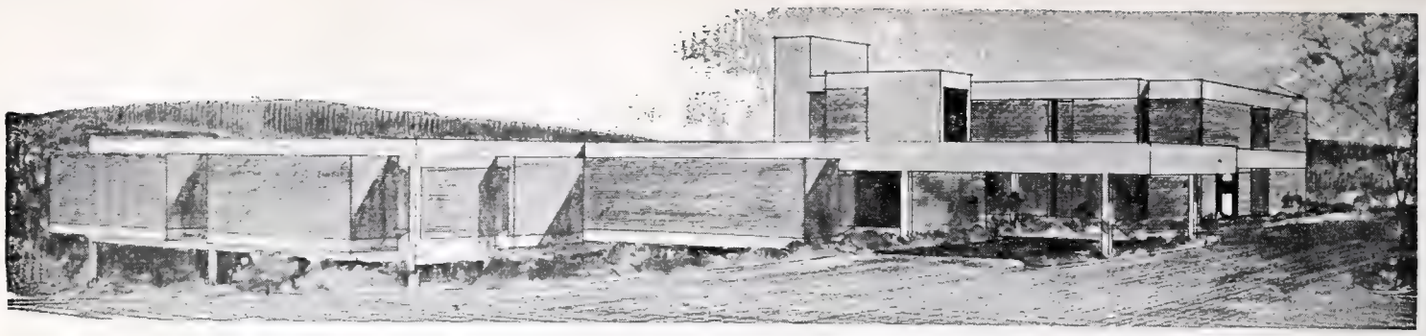


5. The laser endoscope assembly is being used to remove papillomas from the lower trachea.



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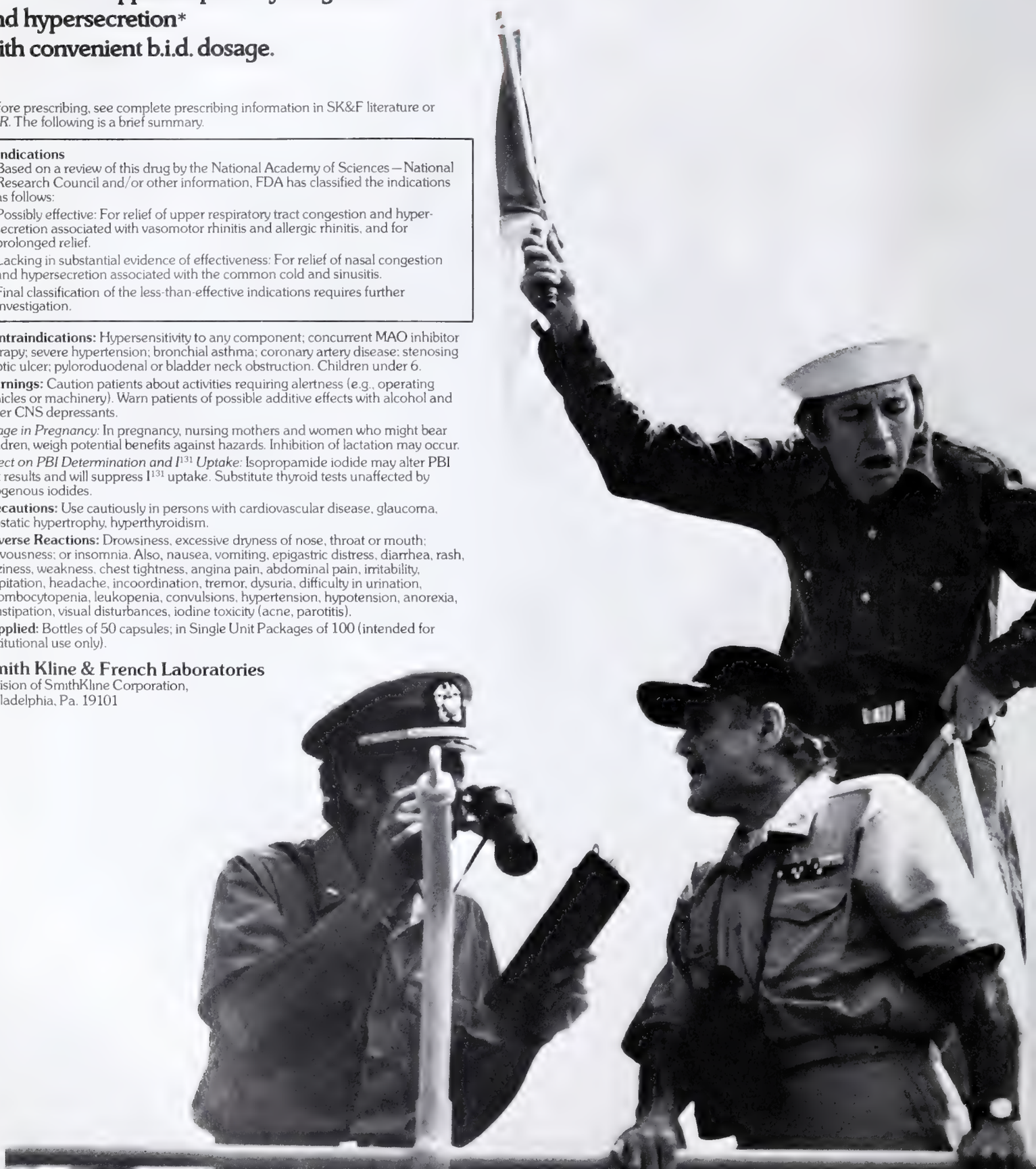

Erosion of splenic artery and colon by pancreatic pseudocyst

Edward A. Lefrak, MD; Ferenc L. Korompai, MD

A patient is described in whom massive hematochezia and colon stenosis occurred. Exploratory laparotomy revealed a recurrent pancreatic pseudocyst that had eroded the splenic artery and perforated the colon to form a pseudocystocolosplenic arterial fistula. Successful treatment required ligation of the splenic artery, splenectomy, distal pancreatectomy with excision of the pseudocyst, and exteriorization of the involved segment of colon.

Sequelae of pancreatic pseudocysts that may act in a deceptive manner include jaundice,[1] ascites,[2] portal hyptertension,[3] inguinal masses,[4] signs and symptoms of renal disease,[5] gastrointestinal hemorrhage,[6] pleural effusion,[7] and colon obstruction.[8-10] The patient described herein had a union of two of these problems: (1) erosion of an artery producing a false aneurysm that penetrated the colon and produced hematochezia, and (2) stenosis of the large bowel. We emphasize the potential danger of these latter two complications of pancreatic pseudocysts, and suggest a plan of management for future patients in whom these secondary changes occur.

Case Report

A 48-year-old man was admitted to The Veterans Administration Hospital in Houston on May 27, 1973, for evaluation of hematochezia, weight loss, and abdominal pain. One year previously he underwent external drainage of a large pancreatic pseudocyst that had adhered to the anterior abdominal wall. Postoperative recovery was prompt and the patient returned to work in six weeks.

Two months later he began to experience weakness and episodic hematochezia. He lost 5.4 kg during the next five weeks and was admitted to the hospital for evaluation.

His blood pressure was 130/85 mm Hg, pulse rate 80/minute, and temperature 37C. The abdomen was scaphoid, soft, and nontender. No abdominal masses were palpable. The stool specimen was guaiac-positive. The hemoglobin level was 4 gm/100 ml and the amylase level 180 units/100 ml. Proctosigmoidoscopy showed no abnormalities. During the next two days, 5 units of packed red blood cells were transfused, increasing the hemoglobin value to 9.7 gm/100 ml. A repeat serum amylase value was 185 units/100 ml. The barium-enema examination showed a persistent stenotic segment at the splenic flexure suggestive of colon carcinoma (Fig 1).

The following morning he had a syncopal episode. The blood pressure was 60 mm Hg and the pulse rate was 130/minute. The hemoglobin was 6 gm/100 ml. Blood transfusions were administered, but hematochezia and hypotension persisted. An exploratory laparotomy was performed.

The splenic flexure of the colon was encased by a dense fibrotic process (Fig 2). A weakly pulsatile mass was palpable in this region. An attempt to mobilize the colon resulted in massive intraperitoneal hemorrhage. The bleeding source was found to be the splenic artery, which had been croded anteriorly by a pseudocyst. The resultant false aneurysm composed the posterior wall of the pseudocyst, compressed the spleen, and penetrated the splenic flexure of the colon. The splenic

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1a, b. Barium-enema examination shows persistent "napkin-ring" stenosis of the splenic flexure.

artery was ligated and a splenectomy and distal pancreatectomy were performed. The pseudocyst was included within the portion of pancreas removed. The involved segment of the colon was dissected free from the retroperitoneal mass and exteriorized. Fourteen units of blood were required during the operation. The patient recovered uneventfully and was discharged from the hospital on the 13th postoperative day. Colostomy closure was performed four months later. He has remained well since that time.

Comments

The massive hematochezia that occurred in this patient with a pancreatic pseudocyst was caused by destruction of the anterior wall of the splenic artery with erosion into the colon lumen. Gastrointestinal hemorrhage resulting from arterial damage has been recorded in other patients with pancreatitis and a secondary pseudocyst. The blood vessels involved have included: splenic,[6,12-14] common hepatic,[15] right gastric,[6] gastroduodenal,[12,16] and the superior pancreaticoduodenal arteries.[17,18] The communication with the gastrointestinal tract usually has been retrograde through the pancreatic ducts, but injury to mural arterioles of the contiguous stomach, duodenum, and colon also has led to severe intestinal hemorrhage.[12,18,19]

The second complication of pancreatitis and pseudocyst formation that occurred in our patient was a colon stricture. Dissection of pancreatic enzymes within the transverse mesocolon and the phrenicocolic ligament generated a dense pericolonic inflammatory reaction with fat necrosis that led to localized stenosis noted on the barium-enema examination. Differentiation of this type of extrinsic inflammatory reaction producing deformity of the large bowel from colon carcinoma frequently has caused difficulty in the past.[20] Preservation of the mucosal pattern is only a suggestive sign that the narrowing has not been produced by colon carcinoma.[11] Colonoscopy should provide future assistance in this

differential diagnosis between extrinsic and intrinsic large bowel disease.

Retrospective analysis of these two sequelae of pancreatitis and pseudocyst formation have led to development of certain concepts of management for future similar clinical problems. Patients with hematochezia, history of protracted pancreatitis, and a possible pseudocyst, must be *suspected* of having arterial erosion. Selective celiac and mesenteric arteriograms may be helpful in documenting the source of hemorrhage or indicating arterial deformity before the abdominal roentgenograms are obscured by barium.[21,22] If an arterial false aneurysm is found, ligation or repair of the involved blood vessel should be performed expediently because of the danger of severe hemorrhage. During the operation it would be helpful to temporarily obtain control of the abdominal aorta at the esophageal hiatus and just proximal to the renal arteries prior to exposing the false aneurysm. This maneuver would prevent massive uncontrollable hemorrhage during the subsequent dissection. The damaged artery could then be safely managed, the injured colon excised or exteriorized, and the pseudocyst drained.

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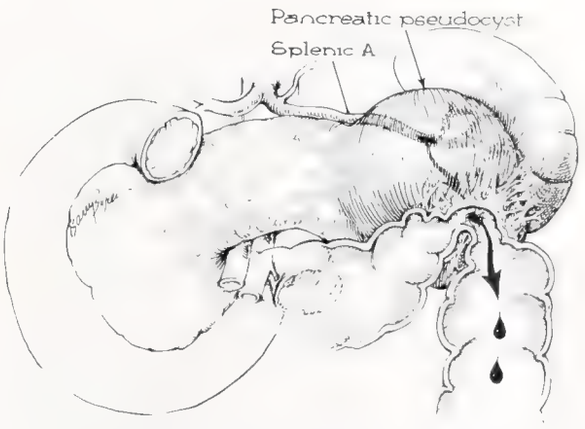


2. Drawing of the pancreatic pseudocystocolosplenic arterial fistula. An extrinsic, dense, inflammatory reaction produced the colon stenosis noted on barium-enema examination.

Early nonejection systolic clicks

Antoine T. Nasrallah, MD; Galal M. El-Said, MD; Efrain Garcia, MD;
Yousef M. Goussous, MD; Mark I. Feldman, MD; Robert J. Hall, MD

The main characteristics of the auscultatory electrocardiographic, or prolapsing mitral leaflet syndrome, include a mid-to-late nonejection click and inferolateral T-wave change.[1-7] Nonejection clicks early in systole have been described only by Barlow and associates[4] in six patients after mitral valvotomy, and more recently by Hutter and co-workers[8] in five patients. This report describes a group of 18 patients who were evaluated predominantly for chest pain, and in whom early nonejection systolic clicks and anterior precordial electrocardiographic changes were present. No obstructive coronary artery disease was seen but abnormalities of the mitral valve apparatus were demonstrated in all patients.

Material and Methods

The series included 17 women and one man who ranged in age from 24 to 66 years. In addition to thorough clinical evaluation, a phonocardiogram and carotid pulse tracing were recorded using an Elema #EM 34 Mingograph. The systolic time intervals were analyzed and expressed as a ratio between the pre-ejection period (PEP) and left ventricular ejection time (LVET).[9] The left ventricular ejection fraction (EF) was calculated by the regression equation,[9] ie, $EF = 1.125 - 1.25 \times PEP/LVET$. Apexcardiograms were recorded and analyzed in five patients using the methods described by Benchimol and Dimond.[10] Exercise test results were obtained in all patients. Four patients underwent the double Master "2-step" exercise test and 14 patients, a programmed treadmill exercise test. The latter test consisted of three minutes at 1.7 mph, two minutes at 3 mph, two minutes at 4 mph, and three minutes at 5 mph—all at a 10% grade. Coronary arteriography was performed using Sone's technique. Left ventricular angiograms were obtained in the anteroposterior or right anterior oblique projections in all patients in order to visualize the anterior mitral leaflet.

Results

The dominant presenting symptom was chest pain in 17 patients. While the pain in many of the patients was indistinguishable from angina pectoris, it was frequently atypical, fleeting, inframammary and non-effort-related in others. Nine patients complained of palpitations and five of effort intolerance.

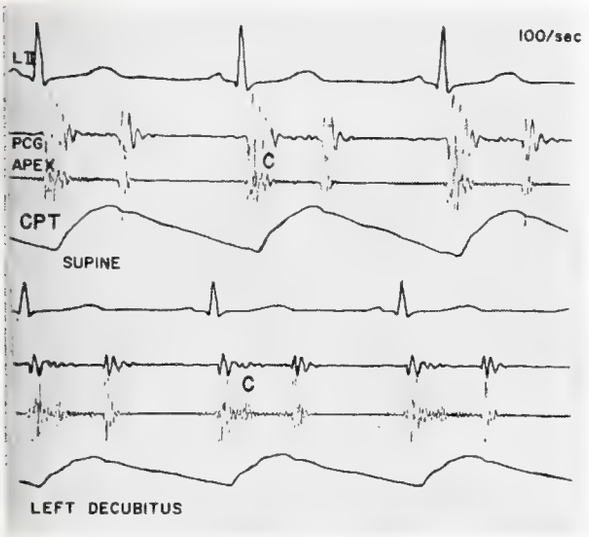
Early systolic clicks were audible in all patients and were found by phonocardiography to occur 40 to 100 msec after the first heart sound (Fig 1). The click moved to mid-systole upon the patient's turning to the left side in only one of the five patients examined in this position (Fig 1). The clicks were seen during the ascending limb of the carotid pulse tracings. In the five patients in whom apexcardiograms were recorded, the clicks were seen after the ejection (E) point and coincided with the onset of a second outward systolic bulge (Fig 2). A late systolic murmur was heard in eight patients. The PEP/LVET and EF were within the reported normal range.[9]

The resting electrocardiograms showed variable degrees of ST segment depression and T-wave inversion in 15 patients. The ST-T wave abnormalities were seen in the anterior leads in 15 patients (Fig 3) and in the inferior leads in three patients. Postexercise straight ST segment depression of 1 mm or more occurred in five patients. The treadmill test was not tolerated for more than five minutes in eight patients and not more than six minutes in the others because of pain or fatigue. Paroxysmal atrial tachycardia was documented in

one of three patients in whom Holter monitor cardiograms were obtained.

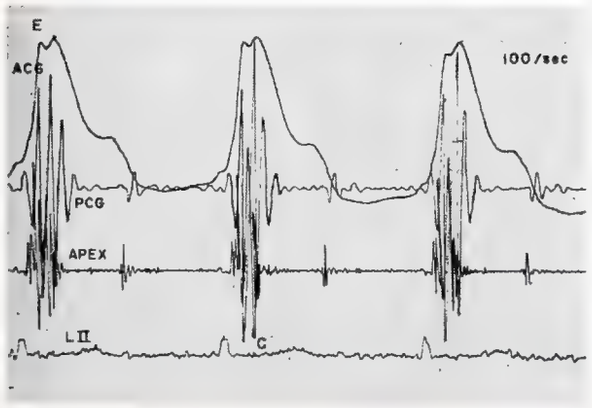
Coronary angiograms were normal in all patients. An unusual tortuous or corkscrew appearance of the coronary arteries was noted in eight patients. The tortuosity was more apparent in the branches of the left coronary artery (Fig 4).

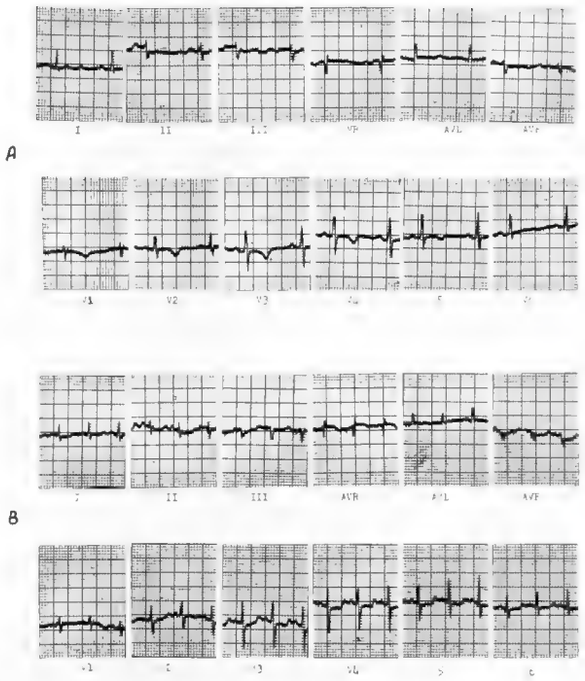
Left ventriculography revealed a dilated mitral annulus or prolapse of the posterior



1. An apical phonocardiogram (PCG) and a carotid pulse tracing (CPT) in a 49-year-old woman. The upper tracing shows an early click (C) occurring at the ascending limb of the CPT. The lower tracing shows that the click occurs later in systole upon the patient's turning to the left side.

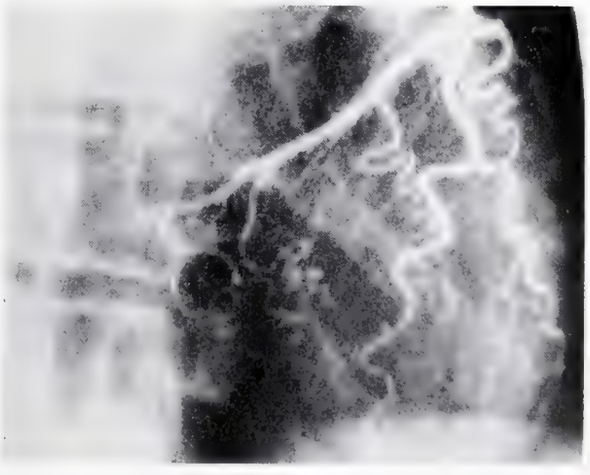
2. An apexcardiogram of a 53-year-old woman showing an early systolic click (C) after the ejection point (E). The nonejection click coincides with the onset of a second outward systolic bulge.





3. (A) Resting ECG of a 60-year-old woman demonstrating abnormal ST-T waves in the anterior and inferior chest leads. (B) An ECG of the same patient after exercising for two minutes, showing straight ST segment depression. The exercise test was stopped because of fatigue and changes indicated on the ECG.

4. A left coronary artery angiogram in the right anterior oblique view. The coronary branches are notably tortuous and have a corkscrew appearance.



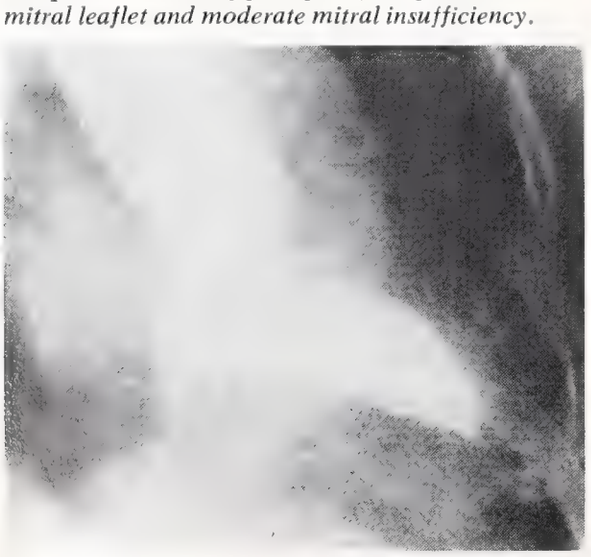
leaflet of the mitral valve in all patients (Fig 5). One patient had prolapse of the anterior and posterior mitral leaflets. Moderate mitral insufficiency was observed in only three patients. Normal contractility of the left ventricle was noted in four of the patients, while hyperdynamic left ventricular contractility was seen in eight patients and posteroinferior asynergy in four patients.

Discussion

The diagnostic and prognostic significance of the auscultatory-electrocardiographic, or prolapsing mitral leaflet syndrome has been repeatedly described.[1-7] Chest pains,[4,5,11] dysrhythmias,[4,5,7,11] subacute bacterial endocarditis,[4] rupture of chordae tendineae,[4,11] mitral insufficiency,[4] and sudden death[5] have been reported in association with the syndrome. These reports and others demonstrate that the prolapsing mitral leaflet syndrome is not always benign.

The patients in this series demonstrate that, in addition to mid-systolic clicks, early nonejection systolic clicks may be heard in the prolapsing mitral leaflet syndrome. The systolic clicks, although early, were believed to be nonejection in origin. All patients had abnormalities in the mitral valve apparatus and none had any disease which might produce an abnormal ejection sound. The clicks occurred during the ascending limb of the carotid tracings, in contrast to aortic ejection clicks which usually coincide closely or precede the beginning of the carotid pulse upstrokes.[12] In one patient, the click moved from early to mid-systole upon her changing from the supine to the left lateral decubitus position. Movement of mid-to-late clicks toward the first heart sound upon the patient's sitting or standing has been described by Fontana and colleagues.[13]

5. A left ventricular angiogram in the right anterior oblique view showing prolapse of the posterior mitral leaflet and moderate mitral insufficiency.



Further support of a nonejection origin for the early systolic clicks was seen in the apexcardiogram. The clicks were seen after the apical ejection (E) point which coincided with the onset of ventricular ejection and ejection sounds.[10,14] The clicks coincided with the onset of a second outward systolic bulge. Willems[15] and later Spencer[16] described a sharp systolic retraction on the apexcardiogram occurring simultaneously with the systolic click. In our patients the apparent retraction was manifest because of the succeeding systolic bulge. Towne and co-workers[17] reported that whenever the position of the click moved to an earlier part of systole, the second systolic wave also moved with the click. Late systolic bulges have been described in patients with abnormal ventricular contractions.[18,19] Although the pathophysiology of the prolapsing mitral leaflet syndrome has not been defined fully, abnormalities of the left ventricular contraction have been recognized by others.[7,20]

The frequent occurrence of anterior rather than inferior ST-T wave abnormalities is different from that of other reports.[3,4]

Coronary cineangiography eliminated obstructive coronary artery disease as a cause of chest pain or electrocardiographic abnormalities. In eight patients, for unknown reasons, notable tortuosity gave a corkscrew appearance to the coronary vessels. The left ventricles appeared hyperdynamic and the ejection fraction was above normal (above 60%) in all patients.

The early nonejection systolic clicks, anterior electrocardiographic changes, abnormal apical systolic bulges, and coronary artery tortuosity are additional features of this common, yet not fully understood syndrome.

Summary

Eighteen patients with early nonejection systolic clicks were evaluated. These patients had features similar to those observed in patients with the mid-to-late nonejection systolic click syndrome. All patients were studied by complete clinical evaluation, phonocardiography, exercise electrocardiography, coronary cineangiography, and left ventriculography. Apexcardiograms were recorded in five patients.

The presenting symptoms included chest pain in 17 patients, palpitation in 9, and effort intolerance in 6. All patients had early nonejection systolic clicks. An apical systolic murmur, starting after the click, was heard in eight patients. On phonocardiogram the click occurred during the ascending limb of the carotid pulse tracing and was 40 to 100 msec after the beginning of the first heart sound. The click coincided with the beginning of a second outward apical systolic bulge. Most of the patients had anteroseptal T-wave changes, and the postexercise electrocardiogram was abnormal in one-third of the patients. Left ventriculography revealed abnormalities of the mitral valve apparatus in all patients and moderate mitral insufficiency in three patients. The coronary angiograms revealed no obstructive coronary artery disease in any of the patients. For unknown reasons, the coronary arteries demonstrated an unusual corkscrew appearance in eight patients.

Acknowledgment

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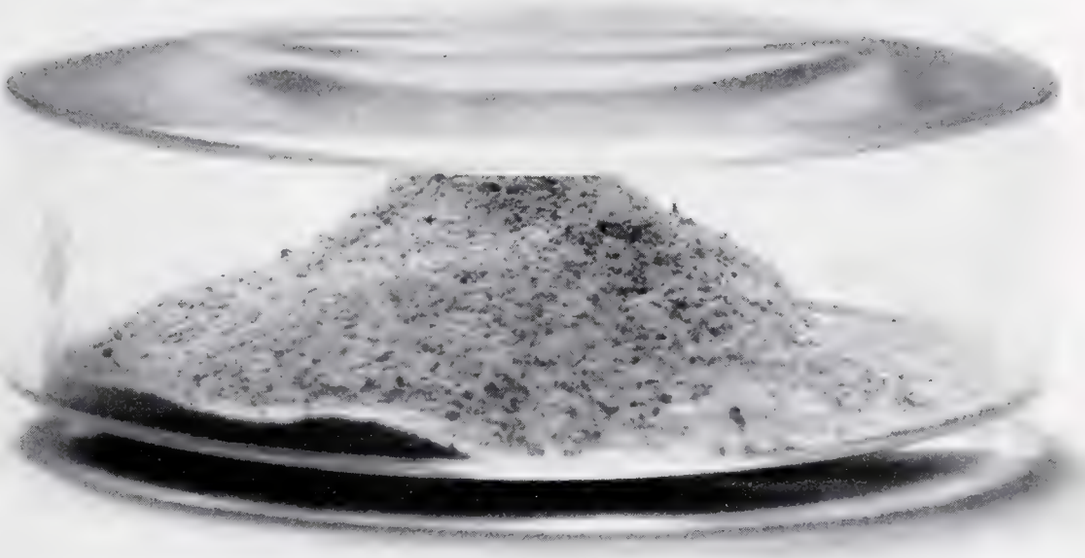

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Diagnosis and management of renal calculi

Roy A. Kaplan, MD; Charles Y. C. Pak, MD

Nephrolithiasis is a common medical problem. One in every thousand Americans requires hospitalization yearly for renal stones, and many are seen in the office or emergency room with episodes of renal colic.[1] There has been significant advancement in the urologic management of patients with renal stones, but still there are many patients who undergo repeated urologic procedures without examination of the cause for stone formation or a trial on a preventive medical regimen. In the light of recent advances in the understanding of the pathogenesis of nephrolithiasis, it is essential that every patient who has urinary tract calculi be evaluated to determine if there is a metabolic abnormality which predisposes to stone formation. Such an evaluation, combined with a urologic assessment to exclude obstruction and a careful bacteriologic study to exclude infection, may decrease the morbidity associated with this disease.

Pathogenesis of Nephrolithiasis

Most stones are composed of an organic matrix and crystals. In the United States, some 90% of stones contain calcium of which about one-third are pure calcium oxalate and the rest are mixed stones of calcium oxalate and calcium phosphate. The remaining 10% of stones are made up of magnesium ammonium phosphate [Mg $(NH_4)(PO_4)6H_2O$, struvite], urate, cystine, or xanthine.[2] The matrix is a mucoprotein[3] whose role in initiating stone development is unknown. Most investigators believe that stone formation begins as a physicochemical process of precipitation from a supersaturated solution.[4] Brushite or calcium monohydrogen phosphate dihydrate ($CaHPO_4 \cdot 2H_2O$) probably serves as the nidus for calcium phosphate stones.[5] Recent studies indicate that brushite may also be the nidus for some calcium oxalate stones. A number of substances have been shown to inhibit nucleation and growth of calcium phosphate and calcium oxalate *in vitro*. Some investigators consider that these substances, such as magnesium,[6] zinc,[7] pyrophosphate,[8] and certain peptides[9] may be deficient in stone-forming urines. However, this contention has been disputed, and therapy with some of these agents has not proven successful. High solute concentrations in urine may lead to supersaturation and crystalluria. Thus, dehydration and excess solute loads, as in the hypercalciuric, hyperuricosuric, hyperoxaluric, and cystinuric states, may contribute to stone formation. This is the basis for forced hydration as therapy in all stone-formers. Abnormal urinary pH may alter the solubility of solutes and thus predispose to precipitation. For example, in alkaline urine, calcium phosphates and Mg $(NH_4)(PO_4)6H_2O$ have reduced solubility and in acid urine, cystine and uric acid are less soluble.

Initial Evaluation

One should approach the problem of renal stones by accumulating an initial data base from the history, physical examination, and routine laboratory studies. One should then proceed to more sophisticated studies if they seem indicated to make the specific diagnosis.

History and Physical Examination

The early onset of stone disease and/or a strongly positive family history should suggest an inherited metabolic defect such as primary hyperoxaluria, cystinuria, hereditary idiopathic uric acid lithiasis,

renal tubular acidosis, Lesch-Nyhan syndrome, or glycogen storage disease. In these disorders, early renal functional impairment is common. Patients with absorptive hypercalciuria often give a positive family history of stones, but the genetics of this syndrome have not been determined as yet. Primary hyperparathyroidism may be associated with multiple endocrine adenomatosis syndrome types I[10] and II,[11] both genetically determined.

In general, stone disease is slightly more common in men. "Idiopathic hypercalciuria"[12,13] and primary gout are more common in men but primary hyperparathyroidism is more common in women. A history or symptoms of urinary tract infections should be sought. Some bacterial organisms split urea and cause passage of persistently alkaline urine high in NH_4^+ content, which predisposes to formation of struvite stones. Stones may also obstruct the urinary tract and become secondarily infected.

A detailed dietary history should be obtained with the aid of a dietician. Excess calcium or oxalate ingestion may aggravate stone disease. A thorough drug history is essential. Vitamin D may cause hypercalcemia and hypercalciuria. Vitamin C in doses greater than 2 gm/day may increase levels of urinary oxalate.[14] Adrenocortical steroid hormones[15,16] and nonabsorbable antacids[17] which bind phosphorus can cause hypercalciuria. Drugs that acidify the urine favor uric acid precipitation. Patients taking carbonic anhydrase inhibitors for glaucoma, such as acetazolamide,[18] may be unable to acidify their urine and may form stones. Unusual stones of phenazopyridine (Pyridium),[19] sulfonamide, tetracyclines,[20] and silicates[21] have been reported in patients taking these drugs. Acute ingestion of ethylene glycol (antifreeze),[22] or exposure to methoxyflurane anesthesia[23] predisposes to hyperoxaluria. Allopurinol therapy has been reported to cause a rare xanthine stone.[24]

A history of chronic diarrhea, ileal disease, or intestinal surgery[25-27] should arouse suspicion of possible uric acid or oxalate stone formation. Episodes of acute arthritis suggest a diagnosis of gout or pseudogout. About one-fourth of patients with primary gout form uric acid stones, but they may also form calcium stones. Pseudogout may be seen with primary hyperparathyroidism. Skeletal fractures, peptic ulcer disease, or pancreatitis suggest the diagnosis of primary hyperparathyroidism. A history of myeloproliferative disease, or recent chemotherapy or radiotherapy for malignancy suggest urate overload. A history of recent immobilization should be sought since immobilization may cause hypercalciuria.[28]

The history alone may supply clues as to

1. Initial laboratory evaluation in stone patients.

Stone analysis	X-ray diffraction or infra-red spectrophotometry
X-rays	Intravenous pyelogram Abdominal roentgenogram (anterior-posterior, and oblique views) Tomograms as needed
Blood	Serum calcium, phosphorus, alkaline phosphatase, electrolytes, creatinine, uric acid
Urine	Routine urinalysis, pH, culture, quantitative cystine 24-hour urine sample for uric acid, creatinine, oxalate, and calcium

2. Diagnostic considerations suggested by stone composition.

Stone Composition	Diagnostic Considerations
Calcium oxalate and/or calcium phosphate	Disorders in oxalate or calcium metabolism
$Mg(NH_4)(PO_4)6H_2O$ (struvite)	Urinary tract infection with urea-splitting organisms or chronic alkali therapy
Urate	Uric acid metabolism
Cystine	Pathognomonic of cystinuria
Xanthine	Congenital xanthinuria Allopurinol therapy
Artifactual material	Malingerer

the etiology of the stone disease. Unfortunately, the physical examination rarely yields any specific diagnostic clues. Band keratopathy (corneal calcification) suggests chronic hypercalcemia. Gouty arthropathy or tophi suggests uric acid stones. Adenopathy or hepatosplenomegaly suggests a myeloproliferative syndrome and uric acid stones.

Initial Laboratory Tests

Fig 1 summarizes the initial laboratory work useful in evaluating stone patients.

Stone Analysis: Every patient with renal colic should strain his urine to recover stone material, and all surgically recovered stone material should be submitted for stone analysis. Stone composition itself may be pathognomonic of the cause for the stone formation, or may suggest the area needing more thorough evaluation, as illustrated in Fig 2.

X-ray: Excretory urography should be performed initially in all stone patients if they are not allergic to the radiographic dye. This is done to locate and quantitate stones and to rule out any obstructing lesions or abnormalities of the urinary tract. After this initial study, abdominal roentgenogram, with tomography as needed, may be used to follow patients who have radiopaque stones. The x-ray appearance of stones may be useful in diagnosis. Uric acid and xanthine stones are radiolucent. Calcium-containing stones are radiopaque. Cystine stones are opaque, although less so than calcium stones. Staghorn calculi may be seen with urinary tract infection, hyperuricosuria, cystinuria, or with primary hyperparathyroidism. Nephrocalcinosis may be seen in primary hyperparathyroidism, renal tubular acidosis, and chronic pyelonephritis, and should be distinguished from medullary sponge kidney which may be associated with stones and may coexist with hyperparathyroidism[29] or hypercalciuria.[30]

3. Differential diagnosis of calcareous renal stones.

Hyperoxaluria
Primary
Type I Glycolic aciduria
Type II L-glyceric aciduria
Secondary
Ileal resection, chronic diarrhea, vitamin B_6 deficiency, excess oxalate ingestion, methoxyflurane anesthesia; ingestion of ethylene glycol or ascorbic acid (greater than 2 gm/day)
Hypercalciuria
With hypercalcemia (resorptive hypercalciuria)
With normocalcemia
Absorptive hypercalciuria
Renal hypercalciuria
"Normocalcemic primary hyperparathyroidism"
Normocalciuria
Normal intestinal absorption of calcium on low calcium intake but excessive absorption on high calcium intake
With hyperuricosuria
With urinary tract infection
Idiopathic

Blood Studies: A multichannel screen including serum calcium, phosphorus, total proteins, albumin, alkaline phosphatase, sodium, potassium, carbon dioxide, chloride, creatinine, and uric acid should be done. Hypercalcemia, hypophosphatemia, and hyperchloremia suggest primary hyperparathyroidism and indicate the necessity for more detailed study of calcium metabolism and parathyroid function. Elevated alkaline phosphatase in the presence of normal liver function should suggest a search for underlying bone disease. Low values of potassium, carbon dioxide, and pH suggest renal tubular acidosis. Hyperuricemia may be seen with gout or primary hyperparathyroidism.

Urine Studies:

pH: A specimen collected after a 12-hour fast with a pH of less than 5.5 usually excludes renal tubular acidosis. If the pH is persistently alkaline in the absence of urinary tract infection, an ammonium chloride load test should be performed to exclude renal tubular acidosis.

Microscopic: The presence of pyuria or bacteria should suggest urinary tract infection. Hexagonal crystals of cystine should be looked for in an acidified fasting sample since they suggest cystinuria. The presence of urate, calcium oxalate or calcium phos-

phate crystals in some normal urines limits the diagnostic value of crystalluria.

Bacteriology: A properly collected (clean-catch) urine specimen, for culture and sensitivity should be done on all stone patients.

Chemistry: A qualitative nitroprusside test for cystine should be performed on all patients with calculi. A 24-hour urine sample should be collected for uric acid and creatinine values. The latter may be used to calculate an endogenous creatinine clearance if serum creatinine is simultaneously determined. If hyperoxaluria is suspected, an aliquot of urine should be sent to a special laboratory for oxalate determination. The 24-hour urine sample should also be analyzed for calcium. Urinary calcium values exceeding 200 mg/day should lead one to suspect hypercalciuria. However, because of the marked dependence of urinary calcium on diet, a definitive diagnosis of hypercalciuria cannot be made on the basis of urinary calcium values obtained while the patient is on a random diet.

Further Evaluation and Therapy

Calcareous Renal Stones

Fig 3 presents a practical differential diagnosis for calcium-containing renal stones.

Hyperoxaluria: Hyperoxaluria is a rare cause of stone formation. In the primary hyperoxalurias, enzymatic defects in oxalate metabolism lead to increased oxalate synthesis and excretion.[31] The secondary hyperoxalurias are far more common. The hyperoxaluria that complicates ileal disease or resection is probably due to hyperabsorption of oxalate.[32,33] Vitamin B_6 deficiency[34] may lead to hyperoxaluria. Ingestion of ethylene glycol and methoxyflurane anesthesia may cause hyperoxaluria as these compounds are converted to oxalates *in vivo*.

If hyperoxaluria has been documented, a diet low in oxalate should be prescribed. High doses of vitamin B_6 may decrease oxalate excretion. Taurine[26] and cholestyramine,[35] given to a limited number of patients with bowel disease, have been shown to reduce urinary oxalate.

Hypercalciuria: Urinary calcium excretion is altered by dietary intakes of calcium, phosphorus, sodium, and protein. We have defined hypercalciuria by determining urinary calcium levels in subjects maintained on a constant liquid synthetic diet, containing 400 mg of calcium, 100 mEq of sodium, and 800 mg of phosphorus per day. In the control group, the urinary calcium level was less than 200 mg/day with a mean of 108 $\pm$ 42 SD mg/day. Thus, hypercalciuria was defined as urinary calcium exceeding 200 mg/day.[36]

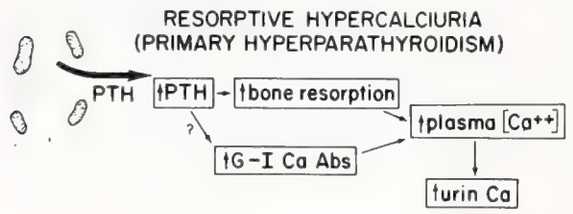
Hypercalciuria may result from three mechanisms: (1) excessive resorption of bone, or "resorptive hypercalciuria;"[37] (2) an enhanced intestinal absorption of calcium or "absorptive hypercalciuria";[37] or (3) an impaired renal tubular reabsorption of calcium, or "renal hypercalciuria."[36] Primary hyperparathyroidism is the prototype for resorptive hypercalciuria (Fig 4). The enhanced secretion of parathyroid hormone (PTH) causes excessive skeletal resorption. The state of hyperparathyroidism is usually also associated with an intestinal hyperabsorption of calcium. Hypercalcemia ensues from the combined effects of excessive bone resorption and intestinal hyperabsorption. The increase in the renal filtered load of calcium accounts for the hypercalciuria. Even though the direct effect of parathyroid hormone on the kidney is to increase renal tubular reabsorption of calcium, this effect is usually overcome by the marked increase in the filtered load of calcium. Osteolytic skeletal metastases are another common cause of resorptive hypercalciuria. Hypercalcemia should serve as a clue to resorptive hypercalciuria.

Absorptive hypercalciuria (Fig 5) is a specific entity in which the primary defect is the intestinal hyperabsorption of calcium. This defect is simulated by sarcoi-

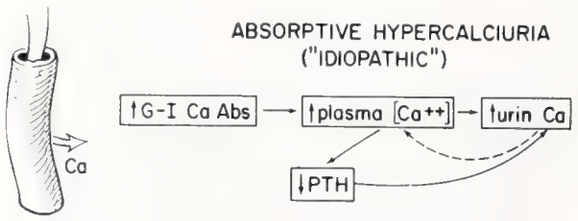
dosis and hypervitaminosis D. An increase in the plasma concentration of calcium, albeit within the normal range, results from the excessive intestinal absorption of calcium. The consequent rise in the renal filtered load of calcium causes hypercalciuria. There is suppressed parathyroid function which impairs the renal tubular reabsorption of calcium and contributes further to the hypercalciuria.

In renal hypercalciuria (Fig 6), the hypercalciuria is the result of a primary reduction in renal tubular reabsorption of calcium. Excessive renal loss of calcium stimulates parathyroid function and may be responsible for a state of secondary hyperparathyroidism. In contrast to primary hyperparathyroidism, serum calcium is

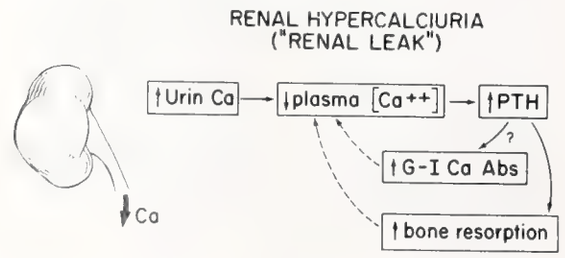
4. Scheme for resorptive hypercalciuria (primary hyperparathyroidism).



5. Scheme for absorptive hypercalciuria.



6. Scheme for renal hypercalciuria.



normal, and parathyroid function should be suppressible with hypercalcemia. This is to be distinguished from so-called normocalcemic primary hyperparathyroidism.[38] In the past, absorptive hypercalciuria and renal hypercalciuria together, were called "idiopathic hypercalciuria."

It is essential that the three forms of hypercalciuria be differentiated, since the optimal treatment depends on the exact etiology of the hypercalciuria. In assessing parathyroid function, the serum radioimmunoassay for PTH is helpful and available but is costly. Urinary excretion of cyclic AMP (cAMP) is an indirect measure of parathyroid function and may be a satisfactory alternative.

A simple test has been developed for the differentiation of primary hyperparathyroidism and absorptive hypercalciuria.[39] After an overnight fast, urine is collected for two hours for calcium (Ca) and creatine determinations (Cr). An oral load of 1 gm of calcium is then given after venous blood has been obtained without stasis for Ca. Urine is then collected for the subsequent four hours for Ca, Cr, and cAMP. In primary hyperparathyroidism, fasting urinary Ca/Cr ratio and four-hour urinary cAMP values after 1 gm oral calcium load are significantly elevated (Fig 7). In absorptive hypercalciuria, urinary Ca is normal during fast, but increases abnormally following an oral calcium load. Urinary cAMP level during calcium load is significantly reduced. The serum calcium level is normal in absorptive hypercalciuria and high in primary hyperparathyroidism. The triad of normocalcemia, normal fasting urinary calcium, and high urinary calcium following an oral calcium load usually assures the diagnosis of absorptive hypercalciuria. Unfortunately, about 30% of cases with primary hyperparathyroidism do not show abnormal responses. No cases of renal hypercalciuria were studied, but these patients should have normocalcemia, with high fasting urinary calcium and cAMP.

The treatment of choice for primary hyperparathyroidism with renal stones is surgical removal of all abnormal parathyroid tissue. Postoperatively, the urinary Ca level falls, and stone disease usually remits. In

absorptive hypercalciuria, a low calcium diet should be the initial therapy. A diet of less than 400 mg calcium/day is tolerated by most patients. If stone disease persists on this diet, sodium cellulose phosphate in a dosage of 5 gm two to three times per day with meals may correct the hypercalciuria by specifically binding calcium in the gut, and may reduce stone formation.[40] However, because of the potential parathyroid stimulation, this drug is contraindicated in primary hyperparathyroidism, normocalciuric nephrolithiasis, or in renal hypercalciuria.

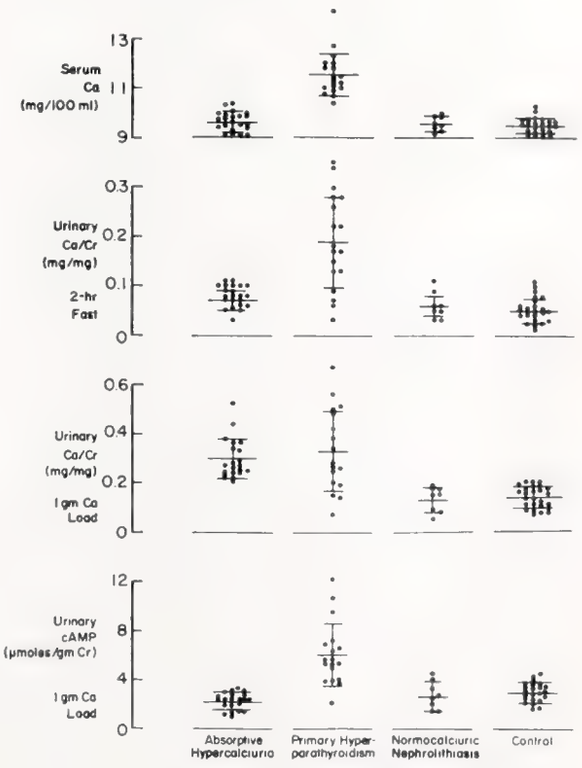
Since cellulose phosphate is not yet available in the United States, we presently use thiazides in absorptive hypercalciuria. Thiazides reduce renal excretion of calcium and increase urinary zinc and pyrophosphate, which are known inhibitors of nucleation.[41,42] Thiazides have been shown to decrease stone formation in doses equivalent to hydrochlorthiazide 50 mg twice a day orally.[43] However, hypercalcemia, hyperuricemia, reduced glucose tolerance, and hypokalemia sometimes complicate therapy. When thiazides are contraindicated or ineffective, orthophosphates have been used. Orthophosphates may prevent stone formation,[44] probably by decreasing urinary calcium[45] and increasing urinary inhibitors such as pyrophosphate.[46] However, they may cause extraskeletal calcification[47] and may stimulate parathyroid function. In the presence of urinary tract infection, phosphates have been shown to aggravate nephrolithiasis. In renal hypercalciuria, thiazides are the drugs of choice, since they increase the tubular reabsorption of calcium, and may correct the hypercalciuria and the secondary hyperparathyroidism.

Normocalciuria: Certain patients with calcareous renal stones may be normocalcemic and have normal renal excretion of calcium and oxalate. Some of these patients may suffer from a variant of absorptive hypercalciuria, since they may have an exaggerated calcium excretion, on high calcium intakes, despite normal urinary calcium values at low calcium intakes. They may do well on dietary calcium restriction alone. There is also a subgroup of patients who show hyperuricosuria or hyperuricemia. In them, allopurinol has been shown to decrease calcium stone formation.[48]

In some cases with normocalciuria, a urinary tract infection may be associated with nephrolithiasis. Appropriate antibiotic therapy should be undertaken prior to evaluation for other causes of stone formation. Finally, in some patients with normocalciuric nephrolithiasis, the cause of their stone diathesis remains obscure.

A new compound, EHDP, a diphosphonate, may be useful in the future therapy of calcareous stone formers of all types. This compound inhibits the nucleation of brushite and inhibits crystal growth of brushite and oxalate *in vitro*. When EHDP is administered to patients with renal stones, their

7. The serum Ca, two-hour urinary Ca after an overnight fast, and four-hour urinary Ca and cAMP values following an oral load of 1.0 gm Ca are presented as mean ± SD.



urine shows marked inhibition of crystal growth of brushite.[49,50] It is now undergoing extensive clinical trials in the United States.

Uric Acid Lithiasis[51]

Patients with radiopaque stones or uric acid stones by analysis need to be evaluated with the focus on an underlying defect in purine metabolism. An adequate history, physical examination, and careful measurement of serum and urinary uric acid should allow one to identify a primary defect if one is present. Primary gout may be diagnosed by a history of concurrent arthropathy or tophi on physical examination, but uric acid stones may precede the arthritis. Lesch-Nyhan syndrome[52] is a rare enzyme defect diagnosed in childhood. These children present with mental retardation, self mutilation, a movement disorder, and uric acid overproduction. Uricosuric drugs and overindulgence in purines or proteins can produce hyperuricosuria (urinary uric acid level greater than 800 mg/day on a free diet in the presence of normal serum uric acid values). Defects in tubular reabsorption of uric acid have been reported to cause hyperuricosuria. These may be seen in Fanconi's syndrome or Wilson's disease, but may also occur as isolated defects. Uric acid stones may be seen in primary hyperparathyroidism, with or without associated hyperuricemia.

Therapy should be directed at the primary abnormality. Uric acid lithiasis can usually be satisfactorily controlled by alkalizing the urine with sodium citrate or bicarbonate to a pH greater than 6.5 to increase urate solubility, and with the xanthine oxidase inhibitor, allopurinol, in a dose of 100 mg one to three times/day.

Cystinuria

Cystinuria is a rare disorder of amino acid transport in the kidney and gut.[53]. Excretion of cystine, ornithine, arginine, and lysine is increased in the urine. Cystine is sparingly soluble and forms stones in most homozygotes who excrete more than 500 mg in 24 hours.

Therapy is directed towards solubilizing the cystine with forced fluids and vigorous alkalinization since at pH 7.8, cystine is twice as soluble as at pH 7.0. If conservative therapy fails, d-penicillamine, which combines with cystine to form a more soluble disulfide complex, may be given until all stones are dissolved and then stopped or titrated to the lowest dose necessary to prevent stone formation. Unfortunately, this drug may cause nephrotic syndrome, blood dyscrasias, or a serum sickness-like syndrome.

Conclusion

Nephrolithiasis is a common clinical problem whose pathophysiology is now becoming more clearly elucidated. By approaching this problem in a systematic way, it is hoped that the morbidity associated with stone disease will be reduced in the future.

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The Upper Functional G.I. Disorder

The Pseudo-ulcer

Ulcer-like symptoms: no G.I. pathology

X-ray demonstrates normal stomach.

The patient is convinced he has an ulcer. However, symptoms are not quite typical, and x-ray findings are negative. These findings and the results of additional diagnostic procedures exclude an organic basis for the patient's complaints. A diagnosis of "upper functional gastrointestinal disorder" is made, which is supported by the fact that episodes of painful symptoms coincide with episodes of excessive anxiety, as indicated by the history.

It may be useful to explain to the patient the mechanism by which emotions upset normal G.I. functioning, resulting in hypersecretion and hypermotility and thus causing such symptoms as nausea and epigastric pain. In upper functional gastrointestinal disorders, counseling by the primary physician can often help the patient understand how excessive anxiety may cause flare-ups of G.I. symptoms.

A disproportionate number of patients seen by the general practitioner suffer from functional disorders, as do more than half of those seen by the gastroenterologist.* Where milder cases may respond to counseling alone, if symptoms are severe and disabling to any degree, a suitable regimen may include medication to reduce the symptoms and the excessive anxiety that often provokes these distressing symptoms.

In these cases, Librax as an adjunct can greatly contribute to the course of therapy. Its dual action can offer relief of both painful symptoms and excessive anxiety, because each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br. The antianxiety action of Librium® (chlordiazepoxide HCl) makes Librax exceptional among drugs for certain gastrointestinal disorders associated with excessive anxiety; the clidinium bromide (Quarzan™) component furnishes dependable antisecretory-antispasmodic action. Dosage is flexible; it may be adjusted according to your patient's requirements within the range of 1 or 2 capsules three or four times daily, up to 8 capsules daily in divided doses. Please consult the complete product information regarding precautions and adverse reactions.

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An adjunct in anxiety-related upper functional G.I. disorders

Librax®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

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Please see summary of product information on following page.

An adjunct in anxiety-related upper functional G.I. disorders

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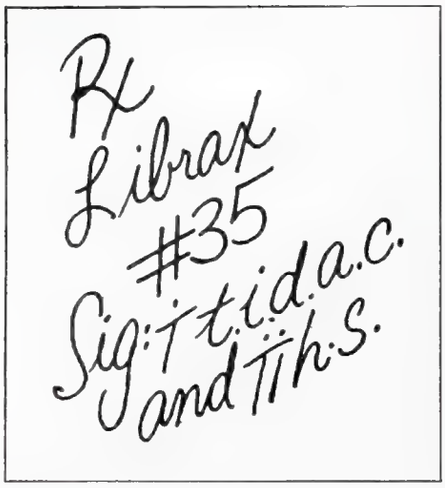

Initial therapy

The initial prescription allows evaluation of patient response to therapy.

Follow-up therapy

Follow-up therapy with a prescription for 2 to 3 weeks' medication usually helps maintain patient gains.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Symptomatic relief of hypersecretion, hypermotility and anxiety and tension states associated with organic or functional gastrointestinal disorders; and as adjunctive therapy in the management of peptic ulcer, gastritis, duodenitis, irritable bowel syndrome, spastic colitis, and mild ulcerative colitis.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

Dosage: Individualize for maximum beneficial effects. Usual maintenance dose is 1 or 2 capsules, 3 or 4 times a day, before meals and at bedtime. Geriatric patients—see Precautions.

How Supplied: Librax® Capsules, each containing 5 mg chlordiazepoxide hydrochloride (Librium®) and 2.5 mg clidinium bromide (Quarzan™)—bottles of 100 and 500.

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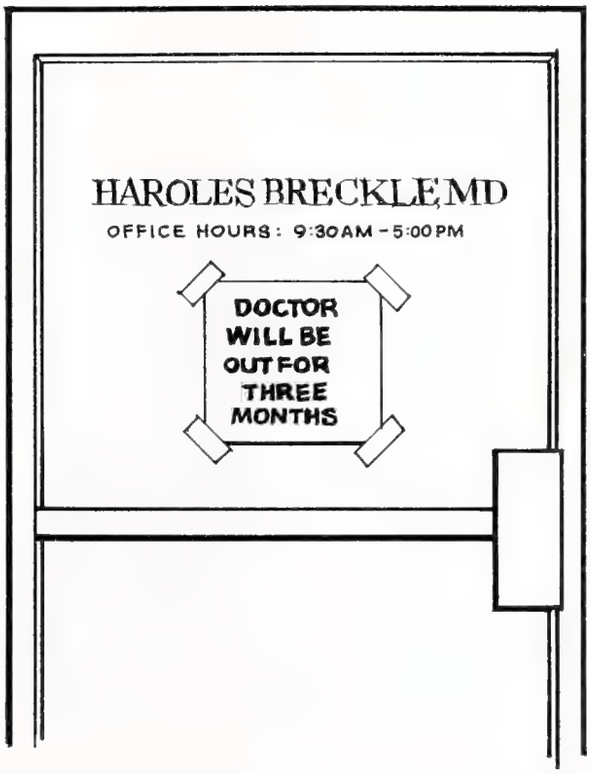
Confraternity committee: it's working in Nueces County

Even doctors sometimes get sick.
And when illness or tragedy strikes, physicians, like their patients, are often faced with serious financial problems.
To alleviate some of the anxieties in times of need, the Nueces County Medical Society initiated a group called the Confraternity Committee. The committee is the prodigy of its chairman, Dr. J. E. Antoni, who can tell firsthand what "confraternity" means.
In 1967 Dr. Antoni suffered a severe coronary occlusion. Unlike today, the hospital did not have the skilled personnel to conduct round-the-clock EKG monitoring. A group of physician friends organized a 24-hour watch of Dr. Antoni's EKG monitor. A total of 52 doctors, serving two to three hour shifts, continued this coverage for ten days during which Dr. Antoni was in critical condition.
In addition, 18 general practitioners organized coverage of his office which was carried on for almost three months. Upon his recovery and return to practice, the family practitioner found his office intact and subsequently suffered no serious financial problems.
Grateful to his colleagues and cognizant of the potential area for service, Dr. Antoni proposed the formation of a Confraternity Committee within the local county medical society. Two years ago, the society decided to discontinue its Condolence Committee and substituted the Confraternity Committee.
The hospitals in Corpus Christi notify the county society when a physician is admitted as a patient. The committee then goes into action. Two members of the comittee visit the ill physician and offer assistance according to the doctor's needs. The committee also sends flowers in the name of the county society to hospitalized doctors or family members.



Office coverage

A major part of the committee's activities concerns office coverage for physicians who are incapacitated. Dr. Antoni said that the response from medical society members has been excellent. Physicians are asked to give an hour or two a week of their off time to cover a colleague's office. This procedure often results in sporadic hours for office staff and patient visits, but according to Dr. Antoni their experience has been highlighted by the cooperation of all persons involved.
As for the hospitalized physician, his or her attitude vastly improves, and the anxiety causing some return to work prematurely is alleviated.

Condolence

Condolence activities have also been incorporated into the committee's functions. When a colleague dies, members of the committee visit with the surviving spouse several times. They offer information that may be useful in settling such problems as what to do with records and how to dispose of office equipment. Dr. Antoni indicated that the committee has been very effective in this area. In fact, on two occasions in the past year, the committee itself negotiated with a local surgical supply house to bid on a deceased physician's office inventory, to buy the entire inventory, and to write a check to the widow. In fact, in one instance, this feat was accomplished in one week. Supply houses have also offered the service of evaluating the worth of individual items.

The committee urges physicians to inform their next of kin of such items as location of will, types and locations of insurance policies, and other pertinent information needed by survivors in settling a physician's estate. With this objective in mind, the county society inserted its pamphlet, "Set Your Affairs In Order" in an issue of *Coastal Bend Medicine*. The pamphlet is also given to every new member of the society, and the committee urges physicians to update the information periodically. The pamphlet is a modification of ones published by the Texas Medical Association and the Harris County Medical Society.

Preventive medicine program

Due to the untimely deaths of several colleagues during its first year in existence, the committee assumed responsibility for the county society's preventive medicine program for MDs. Every county society member was asked for the name of his or her personal physician. Each year, the member receives a written reminder about obtaining a yearly physical examination. The attending physician is also notified. If an appointment is not arranged, the attending physician personally calls his colleague to set up the appointment. In addition, the county society has worked out an agreement with local hospitals whereby laboratory work, x-rays, and such are conducted without charge to the physicians. Dr. Antoni said that 90% of the physicians in Nueces County do receive an annual physical exam.

The committee of six specialists are continually trying to expand to different fields according to the needs of the society doctors and their families. The members acquaint persons with the uses of the physicians' benevolent fund. In seeking solutions to a particular need of an unusual nature, the committee works with a variety of local social service agencies.

At times, the committee also has called upon woman's auxiliary members for babysitting services for the family of an ill physician. Dr. Antoni feels it would be a good idea to have a member of the auxiliary as a permanent member of the Confraternity Committee. He is planning to recommend this addition to the medical society.

Belongs in every county

Dr. Antoni believes there is a place in every county society for a Confraternity Committee. He said that larger societies would require more committee members than smaller societies, but he feels that such a

group provides a unifying bond in any size society.

Some important advice offered by the Corpus Christi MD regarding the formation of a committee was to "start with highly motivated people." He credits the success of the committee to the dedication of its members. Dr. Antoni also emphasized the importance of legal counseling in certain matters. One physician's widow in Corpus Christi received an offer from a doctor to purchase the records of her deceased husband. After checking with the TMA office of legal counsel, the Confraternity Committee learned that such action is against the American Medical Association code of ethics.

The Nueces County Medical Society's committee is believed to be the first of its type in a medical society in the country. Following publicity in the *American Medical News* in July, the society received many inquiries from all parts of the United States. Enthusiastic about seeing the concept adopted by other medical societies, the Nueces County society answers all requests for information regarding the program.

In September Dr. Antoni made a presentation before the TMA and WATMA Committee on Physicians Benevolent Fund. Subsequently the committee drafted a recommendation to the TMA Board of Trustees that the board encourage each county society to institute a Confraternity Committee. The recommendation is pending before the trustees at this time.

Status of health maintenance organizations in Texas

Louis S. Riley, MD

The purpose of this article is to briefly review and consider the current status of the health maintenance organization (HMO) movement, particularly as it applies in Texas, and how it might affect us as physicians. It is not a purpose of this discussion to review and consider the virtues or faults of an HMO.

Timeliness

Consideration of the HMO concept is particularly timely as the result of several significant happenings with regard to HMOs in the past year. On Dec 29, 1973, former President Nixon signed into law the Health Maintenance Organization Act of 1973 (Public Law 93-222). Some consider this the most far-reaching piece of health legislation ever enacted by Congress. By passing it, Congress declared its willingness to challenge the present system of health care payment commonly referred to as the "fee-for-service system," a system that has characterized American medicine since its beginning. Authorities say this new law could touch 100 million Americans in that a key provision in the law requires each employer of at least 25 persons to offer an HMO option to his employees as an alternative to private health insurance if a certified HMO exists in his area. The Department of Health, Education and Welfare will "certify" those HMOs meeting the criteria established by the HMO law's regulations.

To add impetus to the law, $375 million has been authorized over a five year period, beginning last July, to encourage the development of HMOs. The authorized funds are categorized essentially as grants for feasibility surveys, grants for planning and initial development costs and loans for initial operation costs. These new funds, coupled with the required HMO option mentioned previously, will surely encourage a substantial number of new HMOs. Already, over 75 groups in Texas alone have requested application kits for HMO grants and five have received tentative approval for either feasibility or planning grants under the new HMO law. Even prior to the new HMO law, it had been estimated that throughout the country, 800 possible HMOs were already in the planning and development stages, 685 of which are developing without any federal assistance. Several are, of course, being planned here in Texas.

In addition, two of the four leading national health insurance bills being considered in Washington have HMOs as an important alternative delivery system relative to the present delivery system and payment based on ordinary, reasonable and customary charges. National health insurance is expected to be a key congressional issue in 1975.

Definition

Before any further discussion, perhaps it would be wise to offer a definition of a health maintenance organization. There are a variety of definitions of an HMO from simply a "comprehensive pre-paid health plan" to "an organized system of health care which accepts the responsibility to

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Editor's note: This article was originally delivered as a paper at the 1974 TMA Annual Session in Houston. Because of recent developments, the editors of *Texas Medicine* requested Dr. Riley to update his paper for publication at this time.

provide an agreed upon set of comprehensive health maintenance and treatment services for a voluntarily enrolled group of persons and is reimbursed through a prenegotiated fixed periodic payment." Under this definition, there is much flexibility in the organizational structure of an HMO. There are many organizations involved in HMOs including physician groups, hospitals, medical societies, consumer groups, insurance companies, and modifications and combinations of all of these.
Arbitrarily, HMOs can be classified into three categories: highly centralized, moderately centralized, and decentralized. The highly centralized organization is one which has independent contracts with a closed panel partnership of physicians practicing under one roof, with either ownership, control, or contractual arrangements for hospitals and other facilities. The Kaiser-Permanente Group in San Francisco is an example of this type.
The moderately centralized HMO is typified by a group or several groups of doctors practicing together in a single or several clinics but with contractual arrangements by the HMO with hospitals for inpatient care, and perhaps some specialties such as radiology or pathology for subscribers. An example of this type is the Health Insurance Plan of New York. The decentralized HMO is characteristic of the medical care foundation whereby physicians organize and accept HMO enrollees for treatment in their own offices along with fee-for-service patients and usually utilize the normal selection of hospitals, which have contracted for hospital service with the foundation. The administrative functions are centralized in one office. The best known example of this type of HMO is the San Joaquin Medical Care Foundation in California. There are, of course, numerous combinations and modifications of these three categories. Of the original 110 HMOs receiving federal funding assistance for feasibility and planning prior to the Act in December 1973, 24 were physician groups, 21 were hospitals, 17 were consumer groups, ten were medical care foundations and nine were medical schools. The other 19 included public agencies, insurance companies, and other private enterprises or combinations of cooperating organizations.

By passing PL 93-222, Congress declared its willingness to challenge the present system of health care payment of "fee-for-service."

HMO evolvement in Texas

The level of knowledge and interest in HMOs has been considerably less and slower in Texas than in other parts of the country. The reasons for this more cautious acceptance of the HMO concept in this section of the country include the generally prevalent conservative attitude toward medical practice and the fact that there are relatively few group practices and still fewer prepaid health care delivery systems in Texas.
Nonetheless, several groups in Texas became quite interested in the HMO concept as a result of the increased emphasis placed on the HMO delivery system by the government in 1971. As the result of cautious foresight, changing attitudes, and HEW assistance, several groups in Texas began feasibility and planning studies in 1971-72. It was quickly learned that existing state laws, (primarily insurance laws) made it very difficult to establish an HMO. While serving individually valid purposes, the laws taken as a whole, relative to HMOs, simply precluded the orderly and

The next session of the Legislature will face proposals which among other things would attempt to abrogate the prohibition of the corporate practice of medicine in Texas.

optimum establishment of an HMO without a great deal of legal effort. These laws include the state medical practice laws, the state insurance laws, and the state antitrust laws.

Since many states have HMO enabling legislation, it was felt that the same approach would be a straight-forward method of solving these legal restraints in Texas. As a result, enabling HMO legislation was introduced in the State Legislature during the session in 1973. The original version, which maintained physician control of the practice of medicine in an HMO, was introduced by Sen A. R. Schwartz and Rep Joe Allen and was supported by the Texas Medical Association.

This version was altered at committee level in the House, however, by Sen Roy Harrington and Rep Mickey Leland with the support of various interest groups including the insurance industry and Prudential Insurance Company in particular. The primary objectionable alteration was the abrogation of the corporate practice of medicine prohibition in Texas. A final compromise between the two versions was not reached and legislation was not passed in the 1973 session.

In December, 1973, "Guidelines for the Formation and Operation of Prepaid Comprehensive Health Care Plans" were issued by the State Board of Insurance. The guidelines essentially required the involvement of an insurance company in any HMO type program. Subsequently, Senator Schwartz presented to the attorney general a request for a legal opinion as to whether the operation of a prepaid health care delivery system is controlled by insurance regulatory law or whether it is a service controlled by other applicable laws such as the Texas Medical Practice Act and the Texas corporate law. This past July, Attorney General John L. Hill issued Opinion No. H-344 which held that the State Board of Insurance has no regulatory power over prepaid health care delivery systems and that whether or not other regulatory authorities have an impact on such systems depends upon the facts of each type of plan.

Prior to and since this determination, four physician corporations have received 4509a charters from the Secretary of State that were approved by the State Board of Medical Examiners and four charters are pending. Three insurance companies have received approval of HMO type policies by the State Board of Insurance and at least four others are pending. The Chairman of the State Board of Insurance has publicly stated he intends to not abide by the attorney general's ruling, and in addition, he will submit to the Legislature proposed legislation in January which among other things would abrogate the corporate practice of medicine prohibition.

The HMO movement has obviously gotten underway and it is clear that the HMO concept is evolving as a means of delivering health care in Texas. Whether we approve or disapprove we can not ignore the trend.

LEGAL PROTECTION: FACTS YOU SHOULD KNOW

Sam V. Stone, Jr.
TMA Office of General Counsel

MEDICAL RECORDS AND THE OPEN RECORDS ACT

One of the great issues which has surfaced in recent years concerns the confidentiality of the physician-patient relationship on the one hand and the right to access of information on the other. Legislatures have enacted "open records laws;" insurance companies have shared health information with other companies through computerized medical data fed into a central storage bank; and patients and physicians have been left to wonder where the invasion of privacy really begins.

On Sept 3, the attorney general of Texas issued Opinion No. H-390 to the county attorney of Harris County in response to the question as to whether a patient's hospital medical records are excepted from public disclosure under the Open Records Act, (Art 5252-17A, V.T.C.S.), and if so, whether the records may be disclosed to the Parent-Child Development Center of the University of Houston with the consent of the patient or his parents or guardian, when the patient is involved in a program conducted by the center. The attorney general recognized that this was a "unique request," in that a governmental agency is seeking information concerning a citizen under an act whose purpose is to give citizens "information regarding the affairs of government and the official acts of those who represent them as public officials and employees."

The opinion sets out that hospital medical records in general are not expressly excepted from the disclosure requirement of the Open Records Act, although the Act does except from disclosure "information deemed confidential by law, either constitutional, statutory or by judicial decision."

Certain specific medical information is made confidential by statute.

While there has been no court interpretation or attorney general's opinion rendered on this section, it would seem that the attorney general would hold that the records of a medical society peer review, utilization review, credential, and other such committee would be protected from public disclosure.

The attorney general's opinion of Sept 3 quotes with approval the Texas Supreme Court opinion in *Billing v Atkinson,* 489 SW2d 858, which held that:

> It is the right to be free from unwarranted appropriation or exploitation of one's personality, the publishing of one's private affairs with which the public has no legitimate concern, or the wrongful intrusion into one's private activities in such manner as to outrage or cause mental suffering, shame or humiliation to a person of ordinary sensibilities.

In a previous attorney general's opinion, it was held that the broad language of the Billing's opinion would "seem to indicate that such matters as medical condition would be classified as confidential and as being protected by the right of privacy."

The Open Records Act, passed by the 1973 Texas Legislature, guarantees access to public records to any person. The attorney general has held, however, that where personal details are involved in information such as in medical records held by a governmental agency, and where the issue is whether the general public may be given access to that information without any demonstration of legitimate concern, "it probably would be held that the individual concerned has a common law right to control disclosure of that information to the general public."

Examples of such information expressly made confidential include reports of venereal disease to the department of health,

information relating to the recipients of medical assistance, records of public mental hospitals which directly or indirectly involve the patient, and information furnished to the state department of mental health and mental retardation and others where the identity of the patient may be revealed. The attorney general's opinion notes specifically that Art 4447d authorizes the release of information in medical records to the state health department and other groups for certain purposes, and makes confidential the identity of any person whose condition or treatment has been studied, declaring this information to be privileged.

It should be noted that Sec 3 of Art 4447d was not discussed in the attorney general's opinion since it does not relate directly to medical records. Sec 3 provides:

> The records and proceedings of any hospital committee, medical organization committee or extended care facility committee established under state or federal laws or regulations or under the by-laws, rules or regulations of such organization or institution shall be confidential and shall be used by such committee and the members thereof only in the exercise of the proper functions of the committee and shall not be public records and shall not be available for court subpoena; . . ."

Sec 3 of Art 4447d also provides that no member of such a committee shall "be liable in damages to any person for any action taken or recommendation made within the scope of the functions of such committee if such committee member acts without malice and in the reasonable belief that such action or recommendation is warranted by the facts known to him."

In summary, the attorney general's opinion states:

> Those medical records which are not confidential or not made confidential by statutory law may be protected from forced public disclosure under the Open Records Act by a constitutional or common law right of privacy. Whatever confidentialities such records may have may be waived by a written consent from the patient, his parents or guardian.

MEDICINE AND THE LAW

ATTORNEY GENERAL CLARIFIES STATUS OF TEXAS ABORTION LAWS

In attorney general Opinion No. H-369, Attorney General John L. Hill has issued an opinion to the criminal district attorney of Bexar County who asked for official direction in determining "What guidelines and standards should now be used with reference to 'abortions' in this State?"

The attorney general reviewed the Texas Abortion Laws which were declared unconstitutional by the US Supreme Court in *Roe v Wade*.[1] In that Supreme Court opinion, it was held that a criminal abortion statute of the current Texas type that excepts from criminality only a lifesaving procedure on behalf of the mother, without regard to pregnancy stage and without recognition of other interests involved, is violative of the due process clause of the Fourteenth Amendment.

The Supreme Court did set out guidelines which might be used by state legislatures in regulating abortions, though the Court did not attempt to impose these guidelines judicially upon the states. Among the guidelines indicated by the Supreme Court were those which would delegate the abortion decision and its effectuation to the medical judgment of the pregnant woman's attending physician during the first stage prior to approximately the end of the first trimester of pregnancy; the authority of the state to regulate the abortion procedure in ways that are reasonably related to maternal health, should the state choose to do so; and the authority of the state to regulate, and even proscribe, abortion except where it is necessary in appropriate medical judgment, for the preservation of the life of the mother, for the stage of pregnancy subsequent to viability of the fetus.

The attorney general's opinion quotes the concurring opinion of Justice Douglas in *Roe v. Wade* wherein he held:

> There is no doubt that the state may require abortions to be performed by qualified medical personnel. The legitimate objective of preserving the mother's health clearly supports such laws.

The attorney general opinion then holds:

> Although it has been held that in the delivery of a child a midwife is not engaged in the illegal practice of medicine as defined by Art 4510a, (citing cases), we believe that the performance of an abortion presents a significantly different factual situation and would constitute a basis for prosecution under Art 4498.1 and 4510b.
>
> It is our opinion, therefore, that despite the rulings in *Roe v Wade* and *Doe v Bolton* and the absence of any newly enacted statute to replace those declared unconstitutional, the lawful performance of an abortion, other than one that is self-induced, presently is limited in Texas to those performed by persons properly licensed to practice medicine.

In the companion case of *Doe v Bolton*, which held unconstitutional a Georgia statute requiring that abortions be performed in hospitals accredited by the Joint Commission on Accreditation of Hospitals, the Court held that the state law was unconstitutional because there was no showing that only a hospital might meet the legitimate interests of the state in assuring the quality of an abortion during the full term of pregnancy.

In this regard, the attorney general's opinion recognizes that Texas does have a Hospital Licensing Law, and while there is no Texas statute or regulation requiring abortions to be performed in licensed hospitals, if such procedures are performed in any facility which falls under the definition of a "hospital," then the facility would be subject to the same regulations to which other hospitals are subjected. The attorney general's opinion also states:

> . . . It would appear then that further regulation in this area, insofar as the first trimester is concerned, will have to be by statute appli-

cable to facilities generally and not just performing abortions.

The attorney general's opinion also reviews the Supreme Court opinion which held that the Georgia statute which required advance approval of abortion by a hospital medical staff committee was unconstitutional. The Court concluded that a woman has a right to receive medical care in accordance with the judgment of a licensed physician, and the physician has a right to administer such care unobstructed by the imposition of such overview.

The Georgia statute also required that the judgment of the patient's physician be "reduced to writing and concurred in by at least two other physicians duly licensed to practice medicine and surgery. . . ." This, too, was held unconstitutional by the Court on the grounds that the judgment of the attending physician that the abortion was necessary was sufficient. Thus, the state, by statutory regulation, cannot require a different procedure or documentation for abortion than is required for any other medical procedure.

Perhaps the most often asked question relating to these Supreme Court opinions has been whether the hospital may refuse to permit the performance of an abortion within its facilities. The attorney general's opinion contains a review of leading cases from other jurisdictions on this question and concludes:

> The available authorities then hold that private hospitals may decline to permit the performance of abortions within their facilities, but that public hospitals may only prohibit performance of abortions if other similar procedures are likewise prohibited, that is to say abortions may not be singled out. On the other hand, if the hospital specializes in one type of treatment only then it may refuse to perform abortions.

An equally important question involves whether or not a physician may refuse to perform an abortion. The attorney general's opinion cites Texas cases and prior attorney general opinions and states:

> In Texas the relationship of a physician and his patient is contractual and wholly voluntary. A physician is under no legal obligation to practice his profession or to render service to any particular person. (citing cases)
> It has been held further that a physician practicing in a public hospital nevertheless retains his identity and cannot permit the institution free use of his services as if he were an employee.

In reviewing the question of what rights, if any, the father of the child and the parents of a pregnant minor may have in determining whether or not to consent to an abortion of the pregnant female, the Court reviewed cases from Florida which held that neither the father nor the parents of the pregnant female had the right to prohibit an abortion. The attorney general opinion then states:

> In the absence of further Supreme Court pronouncement it is impossible to state categorically that legislation giving the putative father a guaranteed voice in the abortion decision would be unconstitutional but it is clear from the available authorities that such legislation would be subject to severe constitutional question.

The attorney general's opinion concludes by cautioning that any legislative action which may be proposed must meet the guidelines set forth by the US Supreme Court if such legislation can withstand the constitutional attacks which are sure to come.

TMA Office of General Counsel
Sam V. Stone, Jr.

1. *Roe v Wade*, 410 US 113 (1973)

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Medical Newsmakers

DR. CHARLES F. PELPHREY, Austin, has been elected president-elect of the Board of Directors of the Texas Division, American Cancer Society. Dr. Pelphrey has served as a volunteer with the society for the past 19 years and as a member of the Board of Directors and several committees.

DR. JOHN M. SMITH JR., has been named to the AMPAC Board of Directors by the AMA's Board of Trustees. Dr. Smith, San Antonio family physician, also serves as chairman of the Texas Medical Association's Board of Trustees.

Associates of DR. JAY J. JOHNS, recently honored him on his anniversary of 50 years of medical practice in Taylor and Williamson County.

MICHAEL BERRIER, former staff consultant for the Texas Governor's Advisory Committee on Post Secondary Education, was recently named as assistant to the president of The University of Texas Medical Branch by new UTMB President Dr. William C. Levin. Mr. Berrier will serve as liaison for UTMB between the UT Systems Office, the Texas Legislature, and other universities in the area. His duties will also entail keeping current on legislative and administrative developments in both the state and federal governments that are related to the fields of medicine.

Dr. Grover E. Murray, president of Texas Tech University, announced the May Owen Chair in Pathology, the first endowed chair to be established at the university's School of Medicine. The chair, which calls for a minimum gift of $500,000, honors DR. MAY OWEN of Fort Worth, the only woman who has served as president of the Texas Medical Association and recipient of TMA's highest honor, the Distinguished Service Award.

DR. WILLIAM W. SCHOTTSTAEDT has been named to direct the Area Health Education Center (AHEC) of The University of Texas Medical Branch. Formerly a professor in the Department of Family Practice and Community Health at the University of Oklahoma, Dr. Schottstaedt has over 20 years of academic experience. He has participated in the development of a number of educational programs for new types of health professionals and in special programs for minority groups.

Pictured above with TMA chief librarian, Pauline Duffield, is DR. J. E. MILLER of Dallas who recently made a personal contribution to the Texas Medical Association's Memorial Library Endowments. Endowment contributions are a minimum of $1,000.

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

W CAVE
Longview, 1915-1974

S J R MURCHISON
Fort Worth, 1895-1974

C SORY
Corpus Christi, 1913-1974

L M WARNER
Houston, 1902-1974

G M CAMPBELL
Inez, 1916-1974

F W DE STEFFANO
Brownsville, 1900-1974

J W A ALTHAUS
Temple, 1903-1974

R A DATHE
Dallas, 1906-1974

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

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Recent deaths

Dr. Cave

Dr. Murchison

Dr. Sory

Dr. W. Cave

Dr. Walter Cave, Longview family physician, was fatally injured in an automobile accident July 26, 1974. He was 59 years old.

Dr. Cave served with the US Air Force during World War II, and after discharge, attended Southern Methodist University, Dallas, where he received a BS degree. He earned an MD degree from The University of Texas Medical Branch at Galveston in 1950. Following an internship at Women's Homeopathic Hospital, Philadelphia, Dr. Cave began the private practice of medicine in Longview.

The physician's medical memberships included American Academy of Family Physicians, Gregg County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Dorothy Rives Cave, Longview; son, Terry W. Cave, Austin; daughter, Mrs. Connie Walker, Longview; mother, Mrs. Lucille Cave, Longview; two sisters; and one brother.

Dr. S. J. R. Murchison

Retired physician, Dr. St. Julian R. Murchison died in All Saints Hospital, Fort Worth, Aug 8, 1974. The 78-year-old specialist in urology had practiced in Fort Worth for 54 years.

A native of Aledo, Tex, Dr. Murchison was in the last graduating class of Fort Worth School of Medicine. He served with the US Army Medical Corps in 1918, and returned to Fort Worth to begin the practice of medicine.

Dr. Murchison was president of Tarrant County Medical Society in 1936, vice president of Texas Medical Association in 1940, and president of Texas Urologic Association in 1955. He was also a member of American Urological Association and American Medical Association.

He is survived by his wife, Mildred (Lady) Thomas Murchison, Fort Worth; two sons, Dr. Robert J. Murchison, San Diego, Calif; and James Thomas Murchison, Berkeley, Calif; two sisters; and three grandchildren.

Dr. C. Sory

Dr. Crysup Sory, Corpus Christi radiologist, died July 8, 1974. Myocardial infarction caused the death of the 61-year-old physician.

Dr. Sory was graduated from Southern Methodist University, Dallas, with a BS degree. He earned an MD degree from Tulane University School of Medicine, New Orleans, in 1938, and completed an internship and residency at Robert B. Green Memorial Hospital, San Antonio, before establishing a family practice in Freer in 1940. He served with the US Army Medical Corps in World War II, and after discharge from the Army, returned to Freer for a short time before serving a residency in radiology at Parkland Hospital, Dallas.

Dr. Sory began practicing radiology in Corpus Christi in 1950 and remained there until his death.

Dr. Sory's medical memberships included Nueces County Medical Society, Texas Medical Association, and American Medical Association.

He is survived by his wife, Catherine Moss Sory, Corpus Christi; son, William Crysup Sory, San Antonio; and one sister.

Dr. L. M. Warner

Dr. Lucien Minor Warner, a retired Houston family physician and surgeon, died Aug 12, 1974, at the age of 71 years.

Born in Del Rio, Dr. Warner attended The University of Texas at Austin, and was graduated from Tulane University School of Medicine with an MD degree in 1927. Following an internship at Touro Infirmary, New Orleans, he practiced for short periods in Palestine, Tex, Eagle Pass, and Baytown before moving to Houston in 1938. Dr. Warner retired in 1961.

He was a member of American Academy of Family Physicians, American College of Surgeons, Harris County Medical Society, Texas Medical Association, and American Medical Association. He was also a member of Alpha Omega Alpha honorary medical fraternity.

He is survived by his wife, Jessamy Hume Warner, Houston; son, Lucien M. Warner, Jr., Phoenix, Ariz; and daughter, Mrs. T. K. Tomlinson, El Campo.

Dr. G. M. Campbell

Retired Inez ophthalmologist, Dr. George Maury Campbell, died July 12, 1974, in a Victoria hospital. He was 58 years old.

Dr. Campbell was graduated with a BA degree from The University of Texas at Austin, and received an MD degree from The University of Texas Medical Branch at Galveston. He interned at Municipal Hospital, Hartford, Conn, before serving with the US Air Force during World War II. After discharge from the service, Dr. Campbell completed a residency at Manhattan Eye, Ear, and Throat Hospital, New York City, and moved to Houston where he practiced until his retirement in 1965.

Dr. Campbell was a member of American Academy of Ophthalmology and Otolaryngology, Harris County Medical Society, Texas Medical Association, and American Medical Association. He was certified by American Board of Ophthalmology in 1951.

The physician is survived by his wife, Emily Keeran Campbell, Inez; one sister; four brothers; and a number of nieces and nephews.

Dr. Warner

Dr. Campbell

Dr. F. W. DeStefano

Brownsville physician, Dr. Frederick Walter DeStefano died June 27, 1974, following a brief illness. He was 74 years old.

Dr. DeStefano, a native of Coal City, Ill, had lived in Brownsville since 1946. Prior to receiving his MD degree from Northwestern University, Chicago, he had attended Princeton University, Princeton, NJ, and Columbia University, New York City. He served both an internship and a pathology residency at Cook County Hospital, Chicago.

He joined the US Navy, then later served in the US Army and was the last post surgeon at Fort Brown. He was transferred to the European theater and was involved in treatment of Nazi Germany concentration camp survivors. Following the war, he returned to Brownsville where he practiced until his illness. He served as school physician for a number of years and was particularly active in administering to the medical needs of the high school football teams.

Dr. DeStefano was a member of Cameron-Willacy County Medical Society, Texas Medical Association, and American Medi-

Dr. DeStefano

Dr. Althaus

Dr. Dathe

cal Association. He was also a Fellow of International College of Surgeons.
The physician is survived by his wife, Henrietta Farley DeStefano; a sister, Minnie Pellettiere, Chicago; two nieces; and two nephews.

Dr. J. W. A. Althaus

Dr. John William August Althaus, internist and retired Veterans Administration physician of Temple, died July 18, 1974, at the age of 70.
Born near Burton, Tex, Dr. Althaus attended Baylor University, Waco, and was a graduate of Baylor University College of Pharmacy. He received his MD degree from Baylor College of Medicine (then located in Dallas) in 1935. He completed internships at Baylor Medical Center, Dallas; City County Hospital, El Paso; and a residency at Carrie Tingly Hospital for Crippled Children, Hot Springs, NM. In 1938-39, he took post-graduate work in internal medicine at the University of Pennsylvania Graduate School of Medicine, Philadelphia.
Dr. Althaus was called to active duty with the US Army Nov, 1940. Prior to that time he had served tours of active duty as medical officer in the CCC. He also served with the Army Medical Corps in Europe during World War II. After the war, he retained his commission in the US Army Reserve, and was retired with the rank of colonel.
Dr. Althaus joined the US Veterans Administration in Des Moines, Iowa, and in December, 1947, he moved to Temple where he practiced until his retirement in 1973.
Medical memberships included Bell County Medical Society, Twelfth District Medical Society, and Texas Medical Association.
The physician is survived by his wife, Leila E McCullough Althaus, Temple; two sons, John Patrick Althaus, Dallas, and James Warren Althaus, Denton; three brothers; and one sister.

Dr. R. A. Dathe

Dr. Richard Arthur Dathe, long-time Dallas physician, died July 23, 1974, following a long illness. He was 68 years old.
Dr. Dathe received a BS degree from Southern Methodist University, Dallas, and an MD degree from Baylor College of Medicine (then located in Dallas). Upon completion of an internship and residency in internal medicine at Baylor Medical Center, Dallas, he practiced medicine in Forney and Bonham for brief periods before moving to Dallas in 1936. During World War II, Dr. Dathe served as chief of medical service of station, regional, and general hospitals in the US Army. Following discharge, he returned to Dallas where he continued the practice of medicine until his retirement this year.
Dr. Dathe was a member of Texas Medical Association, Texas Club of Internists, Dallas Academy of Internal Medicine, Dallas Southern Clinical Society, Dallas County Medical Society, and American Medical Association. He was a former instructor in medicine and clinical associate professor of medicine at Baylor College of Medicine when it was located in Dallas. Later he served on the clinical teaching faculty of The University of Texas Southwestern Medical School at Dallas.
He is survived by one son, Richard A. Dathe, Jr., Garland; daughter, Mrs. Phyllis Macey, New York City; stepson, Emerson R. Bailey, III, Oakland, Calif; stepdaughter, Miss Linda S. Bailey, San Antonio; one brother, John Dathe; and one grandson.

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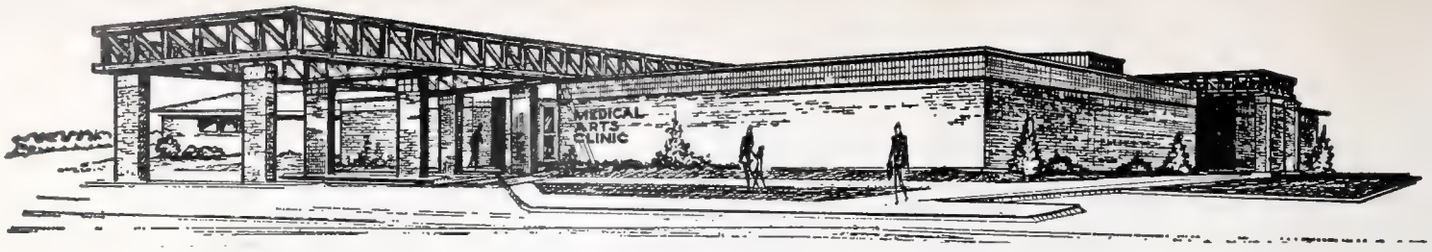

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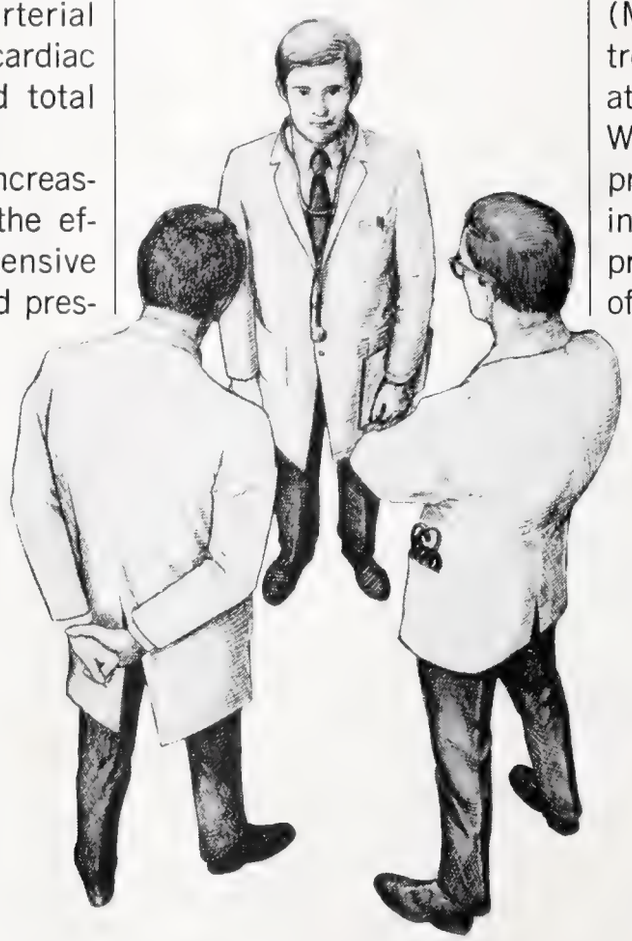

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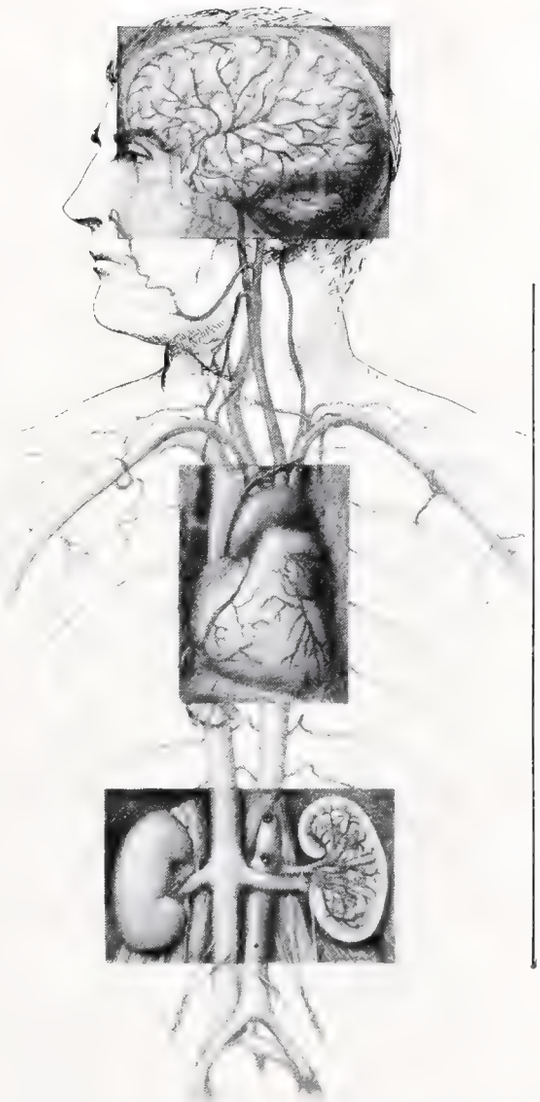

lowering blood pressure. But there are other considerations as well. Cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is actually slowed. Peripheral resistance is apparently reduced. ALDOMET does not usually compromise existing renal function; it generally does not reduce renal blood flow, glomerular filtration rate, or filtration fraction. And ALDOMET usually does not cause symptomatic postural or exercise hypotension.

Contraindications include active hepatic disease and known sensitivity to the drug. Use with caution in patients with a history of liver disease or dysfunction. Not recommended in pheochromocytoma or pregnancy.

It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

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In most cases of sustained moderate hypertension

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Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis. Known sensitivity. Not recommended in pheochromocytoma. Unsuitable in mild or labile hypertension responsive to mild sedation or thiazide therapy. Use cautiously in patients with history of previous liver disease or dysfunction.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between six and twelve months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at six and twelve months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first three weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first two to three months of therapy. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first six to twelve weeks of therapy or whenever an unexplained fever occurs. If fever, abnormalities in liver function tests, or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, reversible reduction in leukocyte count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur.

Use in Pregnancy and Childbearing Age—Not recommended in pregnancy. In women of childbearing age, weigh potential benefits against possible fetal hazards.

Precautions: Methyldopa may interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, spuriously high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has occurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: Sedation, usually transient, may be seen during initial therapy or when dosage is increased. Headache, asthenia, or weakness may be noted as early, transient symptoms. Symptoms associated with effective lowering of blood pressure are occasionally seen and include dizziness, lightheadedness, and symptoms of cerebrovascular insufficiency. Angina pectoris may be aggravated. Symptoms of orthostatic hypotension may occur; if symptoms occur, reduction of dosage is suggested. Bradycardia, nasal stuffiness, mild dryness of mouth, and gastrointestinal symptoms including distention, constipation, flatus, and diarrhea occur occasionally; these generally can be relieved by reducing dosage. Nausea and vomiting have been reported in only a few patients. Sore tongue or "black tongue," pancreatitis, and inflammation of salivary glands may occur.

Weight gain and edema occur infrequently and are relieved by administering a thiazide diuretic; if edema progresses or signs of pulmonary congestion appear, discontinue drug. A rise in BUN has been observed. Other rare reactions include breast enlargement, lactation, impotence, decreased libido, skin rash, mild arthralgia, myalgia, paresthesias, Bell's palsy, parkinsonism, psychic disturbances including nightmares, reversible mild psychoses or depression. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Note: Dosage should be limited initially to 500 mg daily when following previous antihypertensive agents other than thiazides. Maximal recommended daily dose is 3.0 g. Patients with impaired renal function may respond to smaller doses than patients with normal kidney function. Syncope in older patients has been related to increased sensitivity in those with advanced arteriosclerotic vascular disease; this may be avoided by lower doses. Tolerance occasionally seen either early or late, but more likely between second and third month after initiation of therapy; increased dosage or combined therapy with a thiazide frequently restores effective control.

How Supplied: Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

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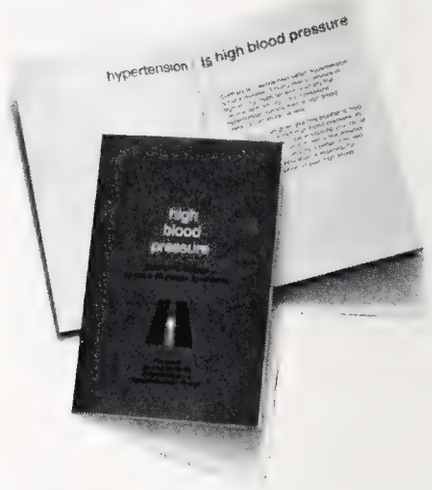

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Physicians Wanted

ORTHOPEDIC SURGEON AND TWO GP's needed by 19 doctor group, 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 3330 South Lancaster Road, Dallas, Texas 75216.

INTERNIST AND GENERAL PRACTITIONER WANTED by a four man group in a 10,000 population county seat town in Central Texas. The location is one hour from Dallas and Fort Worth, 30 minutes from Waco, and 20 minutes from Lake Whitney Dam. The clinic is located in the same building with a 50-bed, fully accredited hospital. The doctors have no hospital financial responsibility. Will start the right man at $36,000 salary for first year and full partnership after one or two years. All office expenses paid. Visiting & relocation expenses paid. Please reply to Ad-301, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FP OR IM TO JOIN THREE MAN GROUP. Investigate facilities, compatability, economics and environment personally with wife and family. Community Health Center, P.O. Box 672, Trinity, Texas. 713-594-3595 for Barnes, Colwell or Cook.

EMERGENCY DEPARTMENT PHYSICIAN IN TEXAS: Average earnings $45,000 with guarantee. Full department status. Maintain free practice of medicine. Work for patient on fee-for-service basis. Call 1-512-653-8221. Apply to Ad-417, *Texas Medicine*, 1801 North Lamar Blvd., Austin, 78701.

FAMILY PRACTICE PHYSICIAN NEEDED to join a three man group doing general practice. New community hospital and new clinic building under construction now, modern golf course, large lake, excellent hunting, excellent schools with no busing and no integration problems. 90 minutes from Dallas-Fort Worth. No investment necessary. Salary first year negotiable, with partnership after one or two years if desired. Contact K. J. Wharram, M. D. or A. D. Major, M.D., Nocona, Texas 76255. AC 817-825-3371.

TWO PHYSICIANS NEEDED. FAMILY PRACTICE PHYSICIAN AND INTERNIST needed to join a full time, seven man clinic association group with part time radiologist and clinical pathologist in Clifton, Texas. Located in the heart of Texas, 35 miles NW of Waco, 15 miles from Lake Whitney. Good fishing, excellent hunting, new, recently completed, modern golf course. Excellent schools, churches and growing progressive small town. Closely associated with new 65-bel hospital facility, which is fully accredited by the Joint Commission. Suggest salary at first with partnership in future. Financial terms open. Please contact V. D. Goodall, M.D., Clifton Medical and Surgical Clinic Association, Clifton, Texas 76634. Telephone 675-8621 or 675-3113.

WANTED: PHYSICIAN TO JOIN GENERAL SURGEON AND GENERAL PRACTITIONER in small town. Privately owned clinic and hospital combination. Guaranteed salary. Prefer family practice specialist. For additional information, please contact M. A. Childress, M.D., P.O. Box 289, Goldthwaite, Texas 76844; Phone 915-648-2212.

FAMILY PRACTICE, with two other family practitioners. Two hospitals with 550 beds within fifteen minute, 4 lane drive. Progressive Central Texas community of 4,350 population. Community void of problems of large cities. 15 miles to Waco (pop. 102,000); 100 miles to Dallas, Fort Worth, and Austin. Good schools (no bussing), churches, country club with 18 hole golf course, three nearby lakes, recreational facilities. An excellent place to raise a family. New associate would be on salary first year; partnership in association later. Exchange calls and weekends with two other physicians. Contact R. Dean Elliott, Administrator, 414 Johnson Drive, McGregor, Texas 76657. AC817-840-3281.

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from big city problems. Call collect Dr. Preston McCall at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

RADIOLOGIST to associate with multi-specialty clinic, soon to be in new hospital with all new equipment; fringe benefits, good climate, good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

INTERNIST with subspecialty in either pulmonary disease or gastroenterology to associate with multi-specialty clinic, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

FAMILY PRACTITIONER to associate with multi-specialty clinic developing a special section on family practice, soon to be in new clinic building adjacent to new hospital; fringe benefits, good climate, a good place to raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

PATHOLOGIST to associate with multi-specialty clinic soon to be in new hospital with all new equipment; fringe benefits, good climate, a good place to live and raise a family; rapid advancement to full association. Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720. Contact J. E. Hogan, M.D., Medical Director.

TEXAS, SAN ANTONIO: EMERGENCY PHYSICIANS NEEDED for new group serving three hospitals; 65,000 ER visits a year. Fee-for-service. Departmental status. Past earning history $45,000 plus additional income for optional participation in employee health service. Write or call George Pruett, M.D., 5239 Round Table, San Antonio, Texas 78218. Telephone 512-653-3612.

UNIQUE CONCEPT: Two family MDs to start in June-July to work nine months rotating schedule, then off three months with salary. Gulf Coast, beaches, deep sea fishing, good attached hospital, salary open first year. Write, call, or come by: Medical Arts Clinic, 1711 West Wheeler, Aransas Pass, Texas 78336; AC512-758-5326.

WE HAVE EXCELLENT OPPORTUNITY in area for GP who wants to do routine surgery, or surgeon who would supplement with FP. Well-established, fully-manned hospital in town. Other physicians would welcome one or two new men. Relaxed life style plus career opportunity for you and your family. More particulars from H. A. Raesener, Jr. (Administrator), Llano, Texas 78643; 915-247-5040.

WANTED: GENERAL PRACTITIONER OR INTERNIST on staff of San Angelo Center. This is an institution for the moderately mentally retarded of the state. Salaries are quite competitive with other state and federal institutions. 40 hour work week, ample vacation time, and other fringe benefits. Excellent community to live near San Angelo, Texas. Contact Medical Director, San Angelo Center, Carlsbad, Texas 76934.

ENNIS, ELLIS COUNTY: OPPORTUNITY for family practice in community of 12,000, serving a trade area of 20,000. Five physicians in town, one hospital, 55 beds, open staff. 35 miles from Dallas. No weekend E. R. call, covered by hospital based physicians. City of Ennis employing physicians on contract basis, office supplied, nurse supplied, billing provided, group hospitalization, paid vacation, etc. Contact Ronald Hudspeth, Administrator, Ennis Municipal Hospital, 803 West Lampasas, Ennis, Texas 75119.

PEDIATRICIAN TO JOIN three board certified pediatric group in professional association; liberal salary and fringe benefits; new pediatric center building to be completed in October is located next to teaching Children's Hospital; beautiful city by the sea, warm year round climate, population 250,000. For details write Box 3154, Corpus Christi, Texas 78404.

SAN JACINTO METHODIST HOSPITAL, BAYTOWN, TEXAS. Physicians solo or group practice; family practice, orthopedics, psychiatry, pediatrics, anesthesiology, etc. Home of Exxon, U.S. Steel, major expansions underway. High income. On bay near Houston. Outstanding schools, colleges. Contact Administrator, 1101 Decker Drive, Baytown, Texas 77520; 713-427-0411, ext. 234.

INTERNIST AND FAMILY PRACTITIONER NEEDED to associate with a two doctor group that is closely affiliated with a nine member specialty group. Location—West Texas—center of prosperous irrigated agriculture area. Excellent medical town of 20,000. Guaranteed income, future partnership with no investment. Contact E. O. Nichols, Jr., M.D., 715 Houston, Plainview, Texas. Phone 806-296-7425.

INTERNIST-GENERAL PRACTITIONER: Clinic, including lab and x-ray. Join surgeon and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Association, 9801 Katy Freeway, Houston, Texas 77024. Phone 713-468-4338.

PHYSICIANS WANTED for care of mentally retarded at Travis State School, Austin, Texas 78767. Salary attractive. Write or phone the Superintendent or Medical Director, P.O. Box 430, Austin, Texas 78767; Phone 512-926-2410. An equal opportunity employer.

PHYSICIAN OWNED AND MANAGED HOSPITAL, 158 beds, has immediate opening for two general practitioners who are interested in practicing in a physician oriented community with guaranteed success. These are private practice opportunities. Only two offices remaining in a new and beautiful medical complex next to the hospital. The hospital will insure your medical success by offering a six months cash guarantee of $5,000 per month in addition to six months free rent. This is a rare opportunity for general practice physicians who would like to work in a GP community. Pasadena, Texas is a progressive city of 100,000 located as a suburb of Houston, Texas, near the Manned Space Craft Center; medical community enjoys high per capita earnings, open staff policies, and unlimited medical opportunities. For additional information write or call Richard Fly, Pasadena General Hospital, 1004 Seymour, Pasadena, Texas 77506. Phone 713-473-1771.

PROFESSIONALLY SATISFYING PRIVATE PRACTICES in Sweetwater, Houston, Dallas, Baytown and Hillsboro. Solo, associate and group in most fields. We are not an employment agency. We will put you in touch with the requesting physicians at no cost to you or them. Write with C.V. or call Sanford Smith, Hospital Management Corporation, 12421 East Freeway, P.O. Box 9836, Houston, Texas 77015. 713-455-1761.

NEEDED IMMEDIATELY: FAMILY PRACTITIONER. The community has three family practitioners, one will retire shortly. The community and surrounding counties serve over 15,000. The hospital has 77 beds and JCAH approved. The medical community is harmonious and stable. Contact: Edward G. Clark, 713-348-2631, Madison County Hospital, Box 698, Madisonville, Texas 77864.

SOLO OR GROUP PRACTICE—on call every 5th night and every 5th weekend. Contact: Byron Terry, P.O. Box 247, Hughes Springs, Texas 75656, phone 214-639-2577 day, 214-639-2738 night; or Victor L. Harville, M.D., phone 214-645-2246 office, 214-656-2561 home.

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FAMILY PRACTICE—OR SPECIALIST willing to practice some family medicine. Solo or associate with established doctor. Excellent potential of establishing as large a practice as desired. New, well-equipped, progressive hospital. Can assure excellent income. Ample office space available. Will consider constructing new clinic. Please reply to Ad-524, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

URGENTLY NEED TWO INTERNISTS OR GENERAL PRACTITIONERS for staff physicians on the medical service, in 346-bed fully accredited GM&S Hospital located in the beautiful Texas Hill Country only 65 miles from San Antonio. Starting salary determined by training and experience. Excellent vacation and sick leave benefits, insurance, retirement, and other fringe benefits. Please write or call Chief of Staff, VA Hospital, Kerrville, Texas 78038; Telephone 512-896-2020, ext. 112. An equal employment opportunity employer.

GENERAL PRACTITIONER OR INTERNIST WANTED (Texas license required) for Student Health Physician. Annual salary with fringe benefits and pleasant association with three other physicians to care for students. Write to Dr. Robert A. Lloyd, Director of Student Health Center, North Texas State University, Denton, Texas 76203 or call 788-2331. We are an equal opportunity employer.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $22,500 to $29,500 with usual state benefits. Texas license or reciprocity required. Contact the Recruiting Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity/affirmative action employer.

CHILD PSYCHIATRY RESIDENCY may be taken before or after adult psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psycho-pharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities, and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed inpatient unit for children. Liaison with graduate schools, medical school, and community programs. Stipends: First year, $13,000; second year, $14,000; third year, $15,000; fourth year, $16,000. Contact Anthony P. Rousos, M.D., Director of Training & Research, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

PSYCHIATRIC RESIDENCY in approved 3-year program. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty and programs. Stipends with Texas license are $13,000, $14,000, and $15,000 per year. In addition, now offering residency in child psychiatry. For full information write to: Anthony P. Rousos, M.D., Director of Training & Research, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

INTERNAL MEDICINE/PULMONARY DISEASES—Need fully trained, clinically oriented chest physician with some laboratory experience. Ideal position for physician with following interests: 1) clinical practice including in-patient and out-patient pulmonary consultations together with approximately 50% general medicine; 2) teaching medical students and housestaff; 3) hospital practice to include rounding with students and housestaff, teaching diagnostic and therapeutic procedures such as bronchoscopy, plural biopsy and thoracenteses, transthoracic pulmonary aspirations, transtracheal aspirations, needle biopsy of intrapulmonary masses, etc. 60-man clinic and satellites. Affiliated with medical school. Excellent fringe benefits. Partnership in two years. Interviewing expenses paid. Call or write J. A. Bakken, Administrator, Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025; Telephone 713-526-2671.

GENERAL PRACTITIONER to join two GP's in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic adjacent to 36 bed hospital recently remodeled. Salary open, partnership available after trial period. Contact Ad-503, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIANS—715 bed hospital with active medical, surgical, psychiatric services, is in need of an internist, orthopedist, and urologist, all preferably with certification. Excellent consultation, library, and continuing medical education. Close affiliation with Scott and White Hospital in education of house staff. New site for medical school. Salary competitive, ample vacation and sick leave, and fringe benefits. Equal employment opportunity agency. Apply Chief of Staff, VA Center, Temple, Texas 76501.

WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City population, 25,000. Drawing area, 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities, Good schools and churches. Ideal family city. Please reply to Charles D. McMillan, M.D., 170 8th Street, S.E., Paris, Texas 75460.

GENERAL PRACTITIONER OR INTERNIST—Excellent location East Texas area. 33 bed hospital, 60 bed long term care facility, JCAH. Solo or salary position (salary open for negotiation). Office space or clinic and housing available. Financial rewards limited only by degree of effort extended. Existing practice waiting. Please reply to Ad-528, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

CHIEF STAFF PHYSICIAN for large refinery and adjoining chemical plant in Texas gulf coast area. Qualified internist or occupational physician with Texas license. Physician will perform pre-employment and periodic physical examinations and handle occupational injuries and illnesses. Excellent benefits and starting salary commensurate with training and experience. Contact W. R. Karn, M.D., AMOCO Oil Co., P.O. Box 401, Texas City, Texas 77590.

OB-GYN PHYSICIAN NEEDED for town of 7,500 population, trade area 40-45M. Eight family practitioners in community desire this specialty. Office space available. Fully accredited 45 bed hospital, located in southeast Texas, 45 minutes from Houston and Beaumont. Coverage available. Contact Jack M. Harrell, Administrator, Yettie Kersting Memorial Hospital, Liberty, Texas 77575; 713-336-7316.

ORTHOPEDIC SURGEON WANTED, Fort Worth, Texas to associate with board certified orthopedist. Please contact Arthur Lorber, M.D., 515 South Summit, Fort Worth, Texas 76104; 817-336-4019.

OPHTHALMOLOGIST: To join well established man in area that is in need of another eye man. R. Wm. Carabelle, M.D., Eye Clinic Association, 3500 Catalina Court, Port Arthur, Texas 77640. Phone 713-985-4325.

INTERNIST—Board certified or eligible wanted to join 12 physician multi-specialty group; city of 20,000 within Dallas-Fort Worth Metroplex. Excellent hospital and community facilities. Financial arrangements dependent on ability, training and boards. Send resume to Ad-533, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

CO-ORDINATOR OF EMERGENCY SERVICES in a large teaching hospital responsible for majority of emergency care in large metropolitan area. Approximately 75,000 emergency room visits per year. Position requires teaching responsibility for intern-resident program; clinical appointment to University of Texas Southwestern Medical School at Dallas. Forty hours per week. Liberal fringe benefit program. For information contact David J. Pillow, Sr., M.D., 1500 South Main, Fort Worth, Texas 76104, or call collect 817-926-5191.

PHYSICIAN WANTED: White Oak, Texas. Growing city of 2500—convenient to Longview or Gladewater Hospitals. Building sites available and construction contractors ready to build to specifications. Local and favorable financing available. Contact J. H. Stewman, P.O. Box 501, White Oak, Texas 75693 or call 214-759-6461.

SWEETWATER. TWO GENERAL FAMILY PRACTICES, solo or associate. $5,000 per month minimum collection guarantee beginning first month. Not a loan. No investment. Minimum practice expense first year. No crime, no pollution. Good schools for your children. Oil and cattle land available for investing your financial surplus. New hospital-medical center complex by summer 1975. Not an employment agency. Call or write with CV to Sanford Smith, Director of Physician Planning, Hospital Management Corporation, 12421 East Freeway, P.O. Box 9836, Houston, Texas 77015. 713-455-1761.

WICHITA FALLS—A BOOMING TOWN with three industrial plants under construction, each over $50,000,000. Suburban clinic with full facilities and two busy family physicians with room for one or two more, and land for expansion. Two major, open staff hospitals. Income guaranteed for associate in family practice; or will lease space to primary care physician of different specialty and funnel our many excess patients to him. Must have good medical background and references. Contact University Park Clinic, 4111 Call Field Road, Wichita Falls, Texas 75308. Phone number 817-692-2024.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. 190 nursing home beds. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860.

BOARD ELIGIBLE PSYCHIATRIST for out-patient clinic. General physician or physician with special interest in mental retardation. Liberal vacation and sick leave, partial payment for excellent hospitalization and life insurance, affiliation with Texas Tech University Medical School. Must have Texas license. Call or write Preston Harrison, M.D., Superintendent, P.O. Box 231, Big Spring, Tx 79720, 915-267-8216.

STAFF PHYSICIAN WANTED NOW: Prefer pediatricians, internists, neurologists, or family practitioners. Texas license required. Base salary $24,500 (September 1, 1974). Bonus available depending on training, experience, specialty boards. Richmond State School is an attractive 6 year old rapidly expanding residential facility for the retarded located in a community of 18,000 only 30 minutes from Houston. An equal opportunity employer. Contact: Richmond State School, James W. Woodfin, 2100 Preston Street, Richmond, Texas 77469. Telephone: 713-342-4681.

MEDICAL SPECIALIST WANTED NOW: Prefer pediatricians, neurologists, or family practitioners. Texas license required. Base salary $27,500 (September 1, 1974). Bonus available depending on training, experience, specialty boards. Richmond State School is an attractive 6 year old rapidly expanding residential facility for the retarded located in a community of 18,000 only 30 minutes from Houston. An equal opportunity employer. Contact: Richmond State School, James W. Woodfin, 2100 Preston Street, Richmond, Texas 77469. Telephone 713-342-4681.

MEDICAL DIRECTOR WANTED NOW: Texas license required. Base salary $24,500 (September 1, 1974). Bonus available depending on training, experience, specialty boards. Housing allowance available $2,100. Will be responsible for medical division including supervision of three doctors. Richmond State School is an attractive 6 year old rapidly expanding residential facility for the retarded located in a community of 18,000 only 30 minutes from Houston. An equal opportunity employer. Contact: Richmond State School, James W. Woodfin, 2100 Preston Street, Richmond, Texas 77469. Telephone: 713-342-4681.

GENERAL SURGEON WANTED FOR PRIVATE PRACTICE as an associate or a partner with an established board certified general surgeon in a community of over 15,000 people near Dallas. Modern two-surgeon office building across the street from JCAH accredited hospital. Contact Ad-535, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTICE WITH GENERAL SURGERY—Solo or join 2 GPs; minimum guarantee; office space available. Hunting and fishing paradise. Excellent schools and churches. Near Houston. Please reply to Ad-536, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

MD—GP OR FP URGENTLY NEEDED in Groesbeck, Texas, to eventually enter partnership with two older MDs, one who plans to retire shortly. Progressive county seat, town of 2,500 people with large trade territory. Multiple medium size industries. Bank assets over 13 million dollars, cattle and gas country. New 38 bed hospital. Excellent, easily available consultants; only 40 minutes from Waco, Texas. Adequate time for recreation, rest and vacation. Please contact Groesbeck Clinic, P.O. Box 470, Groesbeck, Texas 76642.

OCCUPATIONAL MEDICINE-PRIMARY CARE PHYSICIAN, board certified or qualified in internal medicine, occupational, preventive, or aviation medicine, for primary care practice in established satellite clinic with numerous company accounts, university affiliation and proposed prepay health program. (No dual compensation involved for retired.) Excellent beginning salary and fringe benefits. Adjacent Texas Medical Center. Write or call J. A. Bakken, Administrator, Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025. Phone 713-526-2671.

GP FOR ONE MAN CLINIC, 30 miles from Dallas, needed by community desperate for available medical care. Rapidly growing resort and agricultural area, near lakes and recreational facilities. Well-staffed, expanding 36 bed hospital, nearby, with financial assistance and office space available. No night call. Please reply to Ad-538, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

Situations Wanted

OPHTHALMOLOGIST—31, married, completing university residency, June 1975. Desire solo, associate, or group opportunity in Houston area. Ronald D. Cox, M.D., 687 Watersedge Drive, Ann Arbor, Michigan 48105.

POSITION WANTED—57 year old radiologist, certified in diagnosis, roentgen and radium therapy, and qualified in nuclear medicine, seeks full or part-time position with group or small hospital. Please reply to Ad-526, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OTOLARYNGOLOGIST—32, married, military completed, seeks partnership or association with one or more otolaryngologists in Dallas area. Available July 1975. Please reply to Warren Katz, M.D., 114 Squire Hill Road, Upper Montclair, New Jersey 07043.

SITUATION WANTED: EXECUTIVE MEDICINE, MEDICAL DIRECTOR: Board qualified general surgeon MSS, MHA, nominee ACHA, 7 years medical director/commander military hospitals, 10 years chief, department of surgery. Special training in medical audit/accreditation surveys, PSRO and medical staff organization/committees. Personal interviews, curriculum vitae on request. Available Sept. 1, 1975. Please reply to Ad-527, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, BOARD ELIGIBLE, wants to relocate in 5,000-10,000 population town with good hospital. Prefer solo practice. Good references. Available immediately. Please reply to Ad-498, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

CARDIOLOGIST, INTERNIST—32, university trained in all aspects, seeks hospital based or group practice. Available July 1975. Contact Richard Rupp, M.D., 2207 Raleigh Lane, Cincinnati, Ohio 45215; phone 513-761-4770.

FAMILY PHYSICIAN, TAFP member, 1969 graduate with three years general family practice experience desires to relocate to Dallas area (80 mile radius), within 12-24 months. Possibly associate with other physician or small group. Please reply to Ad-529, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SITUATION WANTED: MEDICAL DIRECTORSHIP OR ADMINISTRATIVE position wanted by certified surgeon. Age 49; private practice experience; licensed in Texas; married with family; available for personal interview; can furnish excellent professional and personal references. Plase reply to Ad-534, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WITH SURGICAL TRAINING would like evening and/or weekend part-time work in Dallas-Fort Worth area and suburb. Prefer emergency room or similar work. Can do general practice. Would also consider locum tenens or nonclinical work. Will travel. Please reply to Ad-537, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

FOR LEASE—REASONABLE—2,800 sq. ft. medical office building, located across street from Kleberg County Hospital, Kingsville. Large, paved parking area, six examining rooms, two offices, waiting room, lab, business office. Ample room for two doctors. Town delightful, people warm and friendly. Trade area large, opportunities for success unlimited. Available January 1975. Your interest appreciated. Contact Mrs. Walter E. Fosberg, 12314-A Willow Wild, Austin, Texas 78758.

FOR SALE OR LEASE—Office building completely equipped. Rooms—reception, secretarial and records, consultation, three examining, emergency, x-ray, and lab. Air conditioned. Private parking spaces. Five minutes to hospital. Raymondville, Texas 78580. George E. Bennack, M.D.

FOR SALE—NCR Model 400-100-20A-9 electronic accounting machine and 400-299 electronics unit and NCR 434-1 alpha output switch bank. Three years old with active maintenance agreement. Programmed for physicians. Capable of large group. Billing and accounting or just solo. Call 214-753-8671.

CONDOMINIUM FOR SALE on the Gulf of Mexico at Portofino, Padre Island, Corpus Christi, Texas. Three bedroom, two bath, on the sixth floor; 1,579 square feet; living dining and balcony area; all electric kitchen and built-ins. Call Jim Wheeler, 512-883-7922. Shown by appointment. Write P.O. Box 6731, Corpus Christi, Texas 78411.

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Brown Schools	14
Burroughs Wellcome Company	42
Comatic Laboratories, Inc.	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
The Diagnostic Clinic of San Antonio, P.A.	74
Dorsey Laboratories	43
Russell Grace Insurance	74
Gulfstream Condominium	14
Hair Transplant Symposium and Workshop	18
Heritage Company	86
Kelsey-Seybold Clinic	109
Eli Lilly and Company	50
Loomis-Sayles Funds	33
McNeil Laboratories, Inc.	30
The Martin X-Ray and Radium Clinic	116
Medical Arts Clinic of Corsicana	118
Medical Case History Bureau, Inc.	18
The Medical Protective Company	18
Medicenter Psychiatric Hospital	33
Mercantile National Bank at Dallas	16
Merck Sharp & Dohme	122-124
The Pharmaceutical Manufacturers Association	38-39
The Prudential Insurance Company of America	9
Psychiatric Institute of Fort Worth	117
Radiology Associates of Fort Worth	118
Reed & Carnrick	66
A. H. Robins Company	119-121
Roche Laboratories	1-2, 28-29, 36-37, 96-98, 142-143
Scott and White Clinic	Back Cover
G. D. Searle & Co.	76-77
Seaview Hospital	49
Smith Kline & French Laboratories	78
Starlite Village Hospital	116
Surgical Mechanical Research Inc.	117
Texas Camera Showroom	34
Texas International Airlines	14
Texas Medical Association	
African Adventure	27
Automobile Leasing Program	65
Memorial Library Fund	111
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	118
Wallace Laboratories	34-35, 40-41
Warner-Chilcott	86-87
Wichita Falls Clinic	116

Physicians' Directory	125-134
Classified Advertisements	135-137

Editorials

ENERGY, INFLATION, PRICE CONTROLS

No matter what you read in the paper or hear on the news, there is a real shortage in this country, but it is not a shortage of fossil fuel. It is, instead, a shortage within our government of good old American common sense. While we have had a shortage of petroleum products, there is no evidence whatsoever that we are faced with an energy crisis or that we stand at the end of the petroleum era. All our economic data on resources that have become increasingly scarce exhibit a gradual but persistent rise in price—a classic price pattern for resources that are becoming depleted. But in the American post-war period, an index of energy prices, which includes electricity, gasoline, natural gas, and heating oil prices, which is deflated by the wholesale price index to eliminate the impact of inflation, shows that from 1950 to 1955 real energy prices fell 3.1%. From 1955 to 1960 they fell 3.7%. From 1960 to 1965 they fell 6.5%. From 1965 to 1970 they fell 8.1% and from 1970 to 1973 (on a five-year basis) real energy prices fell by 9.4%. The price of extracting a barrel of crude petroleum in the 1930s excluding bonuses, royalties, taxes and rents was about 80 cents. In 1972, the cost on land was $1.58, and on the continental shelf it was $1.51. Yet in these 40-odd years, the wholesale price index has tripled so that in terms of 1930s dollars, the cost of extracting a barrel of crude petroleum in 1972 was 50 cents as compared to 80 cents in 1930. Not only have real prices been falling, but we have drilled only 2% of the continental shelf which geologists tell us could be one of the richest finds in history. In Alaska we have more proven reserves than we currently have in the continental United States. We have 285 billion barrels of oil in operating and shut-in wells, most of which can be recovered with current technology. We have shale reserves capable of providing 1 trillion barrels of oil, or 100 years' supply at current growth rates. We have in well-identified areas natural gas reserves which would yield a 50-year supply in a free market. We have had the capacity to gasify coal since 1840 and could gasify coal today if it were economically feasible to do so. We have invested heavily in nuclear energy since World War II, and solar and thermal energy are only now being developed on a token basis.

In short, a review of price data and resource inventories indicates that there is no energy crisis in America. We have had a 7- to 12-year stock of crude oil left for 100 years and we have never run out. In 1866, when kerosene broke the whale oil market, the US Revenue Commission was concerned about having a synthetic fuel available when crude oil played out in the 1890s. In 1891 the US Geological Survey reported that there was little oil in Texas, and in 1914 the Bureau of Mines estimated maximum future production of 6 billion barrels. We now produce that much every 20 months.

From the time of the ancient Greek science and philosophy until this century, man was viewed as possessing a given stockpile of resources. His basic objective under such constraints was to adapt himself to nature as best he could. When he was successful he had prosperity; when he was unsuccessful he faced hardship. With a fixed stockpile of resources and growing population, dire predictions were made about the future of man. All these predictions, from the Malthusian overpopulation projections to prophecies of ecological collapse, have had three things in common: (1) they assumed fixed resources; (2) they assumed fixed technology, and (3) they have all been wrong. What history has proven a million times, modern science has finally recognized. Man creates his own environment, and resources are a function of science and technology. For the man who ran naked in the forest, a sharp stone was the only mineral re-

source; yet, by using resources which to him were worthless, man was able to walk on the moon. This proves to me that the only constraint which binds man is the limit of his imagination and freedom of his action.

There are two basic causes of our fuel shortage: The obvious thing is that the supplier of 20% of America's fossil fuel resources attempted to cut us off for some six months. The second and more important factor is that the federal government has disrupted the incentive system of the American oil and gas industry in the postwar period.

Take natural gas as an example. As late as the 1930s, natural gas was largely a waste product; but at the end of World War II, with growing demand, natural gas became the glamour fuel. It was cheap and it burned clean, and a nationwide distribution process developed. In 1954 the US Supreme Court gave the Federal Power Commission (FPC) the power to regulate natural gas prices, and in 1961 the FPC established a price ceiling on natural gas significantly below the free market price level. Therefore, while it was still profitable to produce from existing wells, it was no longer profitable to hunt for new natural gas. From 1962 to 1970 we saw a steady decline in new wells drilled, exploration expenditures, and proven reserves. In 1971 there was an upward adjustment in the rate allowable on interstate sales of natural gas. As a result, we saw a 32% rise in the discovery rate in 1972, and a 40% rise in the first nine months of 1973. What this proves to me is that when government intervenes and sets a price below the free market price, the investment process is stifled and the capacity to produce falls off. When the government allows the price to rise back toward its natural level we see a rebirth of the production process, investment expands, and output increases.

The result of this regulation was not to lower the price to the consumer. At the wellhead price set by the FPC, it was not profitable for private producers to develop sufficient supply. Thus those unable to obtain natural gas were forced to rely on a more expensive and inferior substitute. Indeed in 1972 89% of all imported petroleum products and 46% of all petroleum including crude was heavy oil. Heavy oil is an inferior substitute for natural gas that is used primarily on the Atlantic seaboard to heat homes and generate electricity. Most studies by economists indicate that in a free market, natural gas would be sold for between 80 and 90 cents/1,000 cu ft and undersell heavy oil by one-half. Thus, government regulation of natural gas at the wellhead has produced several unfavorable results: (1) It has produced a higher price to the consumer; (2) it has stifled the development of a domestic energy resource; and (3) it has produced foreign dependence of the American consumer on a more expensive and a dirtier-burning fuel.

In the oil industry there is a similar pattern. In 1969 we were incurring the most prolonged period of rapid price inflation since the Civil War. We have fairly reliable data on prices and inflation dating back to the 15th century, and there has never been an inflation in recorded history that was not preceded by and directly related to a growth in the money stock. In our economy a growth in the money supply comes when government runs a budget deficit and sells some of the bonds that it issues to the Federal Reserve Bank, which in turn simply prints money to pay for it. Our inflation in 1969 was caused by the huge government deficits of the Vietnam war, but in seeking to find scapegoats for its own fiscal irresponsibility, the government imposed wage and price controls. While we have adequate data on inflation dating back 500 years, we have data on price controls which date back to the age of Pericles. From Pericles in ancient Athens to Diocletian in Rome to Phase IV of former Presi-

dent Nixon's price controls, they all have one thing in common: They have never worked.

Petroleum was picked out as an important resource to be regulated because it is an important input in the production or distribution of all basic raw materials. First through jawbone price controls in 1969 and then via mandatory controls in 1971, the retail prices of petroleum products were effectively frozen. As a result, from 1971 to June 1973 we saw a steady decline in the rate of return on investment in the petroleum industry so that 1972 marked the lowest profit year in the petroleum industry in ten years. We have today one-third as many drilling rigs as we had operating in the United States 20 years ago when our level of consumption was only 40% of its current level. But 20 years ago it cost only one-third as much to find a dollar's worth of petroleum as it does today.

The current energy shortage proves once again something that I have discovered in every facet of economics that I have ever studied: Government does not solve problems, government creates problems.

What are government's solutions to our energy shortage? In January I worked with my congressman, Rep Olin E. Teague, on pending energy legislation. We discovered to our amusement and amazement that the Energy Emergency Act used twice as much space on spending millions of dollars to develop a carpool promotion administration as it did in attempting to develop domestic energy resources. Rationing and taxes are not answers—they simply promote the shortage and maintain it. The whole gist of the Energy Emergency Act and all other proposed legislation was to be sure that every American suffered from the energy shortage. The objective was not to eliminate the shortage, but to be sure that everyone's nose was rubbed in it—old and young, poor and rich.

Here is an example of the federal government's logic: Not long ago, someone on the White House staff called me and gave a long spiel about how he had gotten my name from important people, and wanted to ask me to help participate in the development of a new and viable program which would provide a meaningful and relevant stimulation of domestic supply so that all Americans might have adequate fuel. I informed him that indeed out of 211 million Americans he had called the right man, because I knew what to do. I told him that I thought first of all we should develop a system that allowed people to own property, and that we should within that system allow each individual to combine his God-given talents with his property to produce output. We should allow individuals to sell these resources in a free market so that they would have every incentive to produce efficiently and so that each consumer would have an incentive to economize on the things that were expensive and to substitute the things that were cheap. And we could be assured under such a system that we would have maximum output and maximum efficiency. I didn't take full credit for this idea; it appeared in Adam Smith's *Wealth of Nations* written in 1776. I assumed that I would not be hearing from the White House or the Federal Energy Office again, but they went to a great deal of trouble to get in touch with me. That is why I claim that while I didn't invent free enterprise, I became the Washington distributor of it.

I am not pessimistic about the future of America or about the future of the American free enterprise system. I believe that we have seen in the 1970s the failure of government. In the 1950s and 1960s we saw a cry within government for price controls so that we might maintain stable prices and have regulated growth. We fought these people. We repeated to them the lessons of history but they won. In 1971 government imposed price controls and since that time we have had a rate of inflation that is unparalleled in the peacetime history of the United States. We have produced a food shortage in the nation

that has the best land, the most productive capital equipment and the best educated farmer in the world. We have generated shortages of basic resources, disrupted the economic productive process, and sent America into recession.

There was an idea born in the 1930s that all we had to do to eliminate poverty was to spend a few thousand dollars a year. That few thousand turned into hundreds of thousands and millions and hundreds of millions and billions and hundreds of billions and have we eliminated poverty? No, we have made poverty a profession. The poverty program distinguishes itself not so much by its economic cost, but by its human cost. We have developed a system that benefits the professional poverty worker and maintains poverty, and we have excluded millions of Americans from the American dream. What every American businessman knows government has never learned—that is, that money spent on a bad idea is money wasted. Government has had one idea in 40 years, and that idea is that money solves problems. The fact is that money does not solve problems—ideas solve problems.

Today 80 million Americans are receiving medical care under Medicaid, Medicare, or child care programs. At this moment Congress stands ready to put the entire nation on a national health program. Medicare, Medicaid, and National Health Insurance have two things in common: They are programs where somebody pays somebody else's medical bills, and they are programs which provide little or no incentive for the user to economize. Such programs have had huge cost overruns because when medical care becomes free people overuse it. When costs rise the politicians and bureaucrats will seek scapegoats among the vendors of care. PSROs are only the beginning of such activities. If a national health plan which makes medical care free to the user is enacted by Congress, the health care system will be overburdened, costs will skyrocket, and waiting lines will grow long. The government will blame doctors, hospital administrators, and other suppliers for the high cost and will gradually institute socialized medicine. The quality of health care will fall, the cost will rise, and the American people will suffer. It is essential, therefore, that we exert our influence to be sure that the national health insurance plan which is passed is a program where the user always has to pay some marginal cost for additional care in order to limit demand. Everything that I have ever learned in economics, and every practical experience of my everyday life, indicates to me that if something is scarce you don't want to just give it away.

We must break the back of PSROs not because they violate medical ethics and the Constitution itself, which they do, but because they are forerunners of things to come. We must stand and resist totalitarianism at some point—why not now while we are still strong and able to resist?

We dare not pass the control of the greatest medical care system in the world to a government which has proven itself fiscally irresponsible and operationally incompetent. Physicians, other vendors of care, economists, and concerned citizens must work together to develop a program that will not bankrupt the American taxpayers or waste scarce medical resources but will assure that every American has access to adequate medical care.

I think that this is a time for optimism and for action. Because of the failure of government in the 1970s, we have an opportunity today that did not exist in this country a decade ago. I believe that we can turn America around. And I believe that with a little commitment and a little imagination, we can save the American free enterprise system so that our children and all those unnumbered generations who will call themselves Americans can enjoy its blessings of prosperity and freedom.

W. Philip Gramm, PhD, College Station.

Both often

Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequ and/or severity of grand mal seizures require increased dosage of standard convulsant medication; abrupt withdr may be associated with temporary increase in frequency and/or severity o seizures. Advise against simultaneous gestion of alcohol and other CNS depr sants. Withdrawal symptoms (similar those with barbiturates and alcohol) h occurred following abrupt discontinua (convulsions, tremor, abdominal and cle cramps, vomiting and sweating). K addiction-prone individuals under car

respond to one

According to her major
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s rather than in a week or
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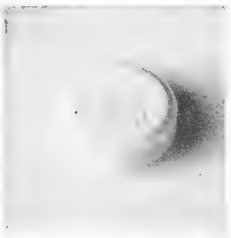
For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.



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ction. Usual precautions indicated in
ents severely depressed, or with latent
ression, or with suicidal tendencies.
Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Medical care lagging behind cost of living increases

Health, Education and Welfare Secretary Caspar Weinberger has increased the intensity of his attacks upon the increases in medical care costs and recently charged that health care costs have been increasing 50% faster than the economy as a whole since price controls ended.

The secretary's figures used in comparing medical increases with the Consumer Price Index are completely unrealistic. The increases in physicians' fees in August 1974 were identical to the CPI all-items category (1.3%). When one compares the various categories from August 1971 to August 1974, it is documented that medical care costs rose 19.2%, the all-items category rose 22.9%, and legal fees rose 32.9%.

Still, Mr. Weinberger continues to single out health care providers as special offenders, and told the pre-summit conference on inflation that "drastic and unfortunate federal intervention," which could result in "nationalizing the entire health industry," might be necessary.

In his comments the secretary ignored a statement by a labor department official to the *New York Times*. The official said that the increases in medical services in the last few months reflect "a catch-up effect" because all other costs were rising when medical care costs were under government controls.

At the pre-summit meeting, chaired by HEW, labor and social welfare groups denounced any attempts to trim federal spending as a means to curb inflation. Instead, they urged passage of national health insurance and establishment of strong controls on health providers.

It is quite obvious that this activity is simply another ploy in the persistent efforts of HEW to prod the Congress into passage of some form of national health insurance. Perhaps my judgment is clouded, but I can visualize government operation of the health service as a catastrophe. One needs only to realize that it now costs eight cents to mail the one-time penny post card!

The US Chamber of Commerce has determined that the 1946 dollar is now worth 40 cents. In the year 2000 it will be down in value to 16 cents.

It appears that a drastic change in philosophy is due in Washington—a return to fiscal sanity.

E W Schmidt, M.D.

E. W. Schmidt, MD, President,
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Texas Medicine

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Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia in elderly patients on diuretics, primarily thiazides. Sore throat, fever, pallor or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. Data are insufficient to recommend use in infants and children under 12.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, allergy or bronchial asthma; and in those with glucose-6-phosphate dehydrogenase deficiency, where hemolysis may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12.

Usual adult dosage: Two tablets b.i.d. for 10 to 14 days. For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

Supplied: Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 1000; Prescription Paks of 40, available singly and in trays of 10.

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VOL 70 DECEMBER 1974

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Contents

SCIENTIFIC ARTICLES

37 Pathophysiology of osteoporosis: Implications for treatment
Dr. Robert P. Heaney

46 Long-term follow-up of tibial condylar fractures
Dr. Mason Hohl

58 Treating lumbar disc lesion by prolonged continuous reduction of intradiscal pressure
Dr. Gerald G. Hirschberg

70 Night terrors in children: Causes and treatment
Dr. Erwin L. Taboada

74 Pediatric grand rounds: Evaluating head trauma in children
Dr. Edwin Jones;
Dr. Robert Zeller;
Dr. William Cheek;
Dr. A. A. Mintz

83 The acute renal failure syndrome
Dr. G. Eknoyan

EDITORIALS

128 Use available tests to screen for cancer
Dr. Billie L. Aronoff

129 Make friends, not lawsuits
Mr. William J. Strickler

132 Which journals are worth your time?
Dr. E. W. Schmidt

FEATURE

94 Medical care costs: know the facts

NEWS

6 House of Delegates actions

12 Annual Session speakers

12 New insurance option

13 Conference cassettes

13 'Feeling Good' premieres

13 Roberts Center receives grants

14 New gonorrhea treatment schedule

14 Legislative conference set

14 Medicine ranks high in poll

14 Correction

15 Inhalation therapy survey

15 TMA sponsoring media competition

15 Group changes name

17 Seminars to train medical directors

17 Bicentennial health ship

DEPARTMENTS

19 Capital Comments

23 Continuing Education

32 Coming Meetings

69 Information for Authors

96 Legal Protection: Facts You Should Know

97 Medicine and the Law

100 Medical Newsmakers

102 Medicine in Literature

106 Recent Deaths

ON THE COVER

Osteoporosis is the most common of all metabolic bone disorders, affecting about one-fourth of all white women over age 55 in North America and Europe. The article beginning on page 37 concerns pathophysiology of osteoporosis.

NEXT MONTH

What it is like to be a woman in the traditionally male medical profession will be explored in a January feature story. Scientific articles will be on acupuncture; a test for evaluating defects in pulmonary perfusion; fat embolization from median sternotomy; clinical staging and treatment of primary lung cancer; basic information about air pollution in Texas; and child abuse.

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Morphologic hypogonadism and nephroses should be ruled out before the drug is administered. If hypopituitarism is present, the adrenal deficiency must be corrected prior to starting the drug.

Myxedematous patients are very sensitive to thyroid and dosage should be started at a very low level and increased gradually.

Precaution. As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions. Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration. Optimal dosage is usually determined by the patient's clinical response. Confirmatory tests include BMR, T_3 ^{131}I resin sponge uptake, T_3 ^{131}I red cell uptake, Thyro Binding Index (TBI), and Achilles Tendon Reflex Test. Clinical experience has shown that a normal PBI (3.5-8 mcg/100 ml) will be obtained in patients made clinically euthyroid when the content of T_4 and T_3 is adequate. Dosage should be started in small amounts and increased gradually with increments at intervals of one to two weeks. Usual maintenance dose is 0.5 to 3.0 grains (32 to 190 mg) daily.

Overdosage Symptoms. Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

(Treatment: In shock, supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.)

How Supplied. ¼ grain; ½ grain; scored 1 grain; 1½ grain; scored 2 grain; 3 grain; and scored 5 grain tablets, in bottles of 100 and 1000.

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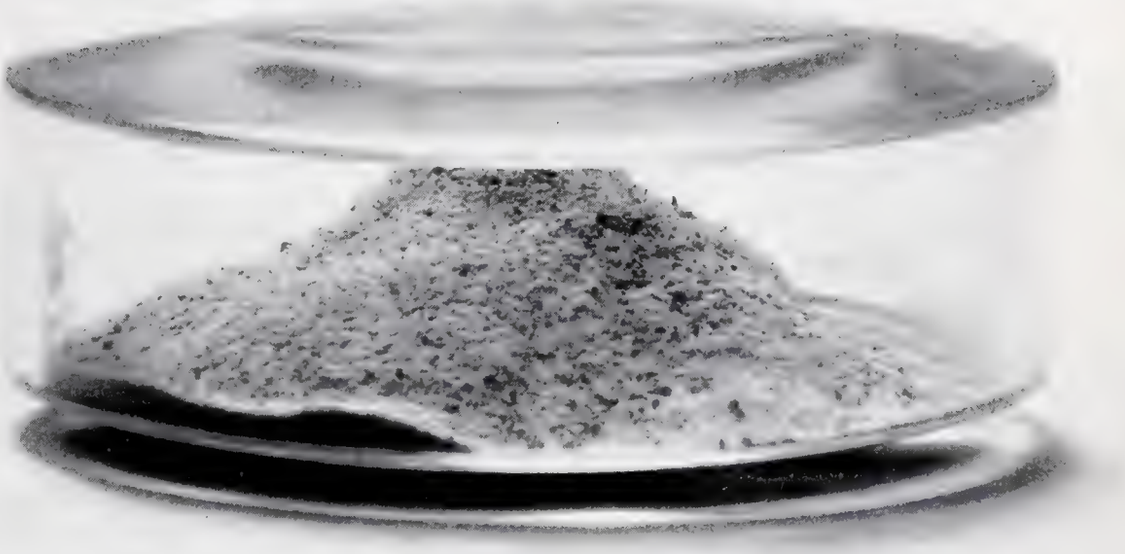

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natural thyroid therapy that leaves nothing to chance

NEWS

House of Delegates session produces actions on scientific, legislative, socioeconomic issues

Numerous ongoing scientific activities, legislative issues, and socioeconomic topics were reviewed by the Texas Medical Association's House of Delegates during meetings in Austin Nov 2-3.

The session marked the second interim meeting of the house since it voted in 1973 to hold semi-annual meetings. The volume of material from boards, councils, committees, and county medical societies indicated significant interest in the session.

Peer review contract

The TMA house voted to enter into a contract with the Texas Medical Foundation to institute and develop an inhouse peer review program. The program would be the basis for a statewide voluntary system of peer review under physician direction and supervision, with emphasis upon local peer review. The program would be totally separate and distinct from government PSRO.

The action followed a recommendation from the TMA's Executive Board, which had considered the subject in detail at its September meeting. The Executive Board expressed concern and urgency regarding the need for programs of peer review which are designed to meet the intensified review requirements of state and federal programs. The inhouse peer review system would be geared toward development of a voluntary statewide organizational system, "within which an effective and efficient local peer review of medical care can be performed." Funds for the contract will be allocated from monies made possible by the special assessment of members.

Malpractice and professional liability insurance

The house also supported actions of the Executive Board to allocate funds from the special assessment for an in depth study of malpractice and professional liability insurance in Texas. TMA President Dr. Ed W. Schmidt has appointed an ad hoc committee to study the problems, find solutions, and determine methods to guarantee the insurability of TMA members. In addition, the Council on Medical Legislation has begun a general review of malpractice legislation introduced in various states. The house also gave the Board of Trustees authority

to empower legal counsel to gather information regarding professional liability suits in Texas, by district if possible, for the past three years. The house approved a resolution calling upon TMA to explore all reasonable and possible solutions to the professional liability insurance problem. A status report on resulting studies on malpractice is to be provided the house at the next meeting.

Special assessment

The house set new deadlines for payment of the special $100 assessment. The delinquency date was changed from Oct 1, 1974 to Dec 31, 1974. Members who have not paid the assessment by that date would no longer be carried on the rolls as members. The Constitution and Bylaws of TMA permits reinstatement to membership if the assessment is paid by April 1, 1975. To date, 9,470 have paid the assessment, representing 87% of the association's regular and provisional members.

The house reaffirmed its position that the assessment is payable in the same manner as dues. The house further charged the Board of Trustees and the Executive Board with the responsibility to re-study the purposes for which the assessment fund may be used. At the May 1975 meeting, the two boards are to provide reports to the house on the specific programs and activities for which assessment funds will have been utilized by that date and budget plans for future use of the funds.

With 195 delegates from 113 county medical societies, the House of Delegates represents the "grass roots" of TMA. Above, Vice Speaker, Dr. Travis Smith, presides over a session of the house; Dr. Sam Nixon, delegate, offers an amendment to a resolution under consideration; and delegates study proposals in the handbook.

Membership relations

The Board of Trustees and the Executive Board were given house approval to authorize the Council on Public Service and Communication to conduct a membership poll of views on important issues.

Considered by the house was a resolution calling for continuing education credit as a requirement for membership in the Texas Medical Association. The resolution was referred to the Council on Medical Education and Hospitals and the Council on Annual Session. A report from these councils is anticipated at the May 1975 Annual Session.

Support for existing schools for doctors of medicine

The delegates strongly affirmed their policy supporting adequate

NEWS

funding for the six existing schools for doctors of medicine in Texas prior to approval of any new schools in Texas. The delegates also concurred with the Council on Medical Education and Hospitals that existing schools for allied health professions should be adequately funded prior to approval of any new schools in these areas.

Additional topics considered

The house, among other actions, approved accident insurance coverage for members of boards, councils, committees, and officers of the association when on official business of the organization; recommended cardiopulmonary resuscitation training for all physicians, regardless of specialty, and urged that county medical societies be encouraged to set up CPR training programs for their members; and requested that TMA members be notified again that a new state law requires insurance coverage of newborns from the moment of birth. Additional information will be published in *Texas Medicine*.

After review of two resolutions pertaining to long-term care facilities, delegates: 1) reiterated the principle that the only notations to be entered on the patient's clinical chart should be those made by professional people having direct patient responsibility and that any observations by reviewing personnel should not be permitted on the patient's permanent chart; and 2) strongly supported the concept that the physician's certification of medical necessity would be the only admission requirement for long-term care facilities.

The house commended two Texas physicians who have long been active in Texas medical affairs, Dr. Truman G. Blocker, who retired in September as president of The University of Texas Medical Branch at Galveston, and Dr. May Owen, past president of TMA, upon dedication of the Dr. May Owen Chair in Pathology at Texas Tech University School of Medicine. The house also applauded and commended Millard Heath, executive director of Dallas County Medical Society, who retires after 30 years of service on Dec 31. Mr. Heath was recently honored by his society with a testimonial dinner.

Transactions of house activities will be forthcoming. The next regular session of the house is scheduled for May 1 in conjunction with the 1975 Annual Session of the Association in San Antonio. Deadlines for reports are Feb 3 and for resolutions, Feb 24.

Between sessions of the house, the association's Executive Board meets bi-monthly. Its next regularly scheduled meeting is Jan 19 in Austin.

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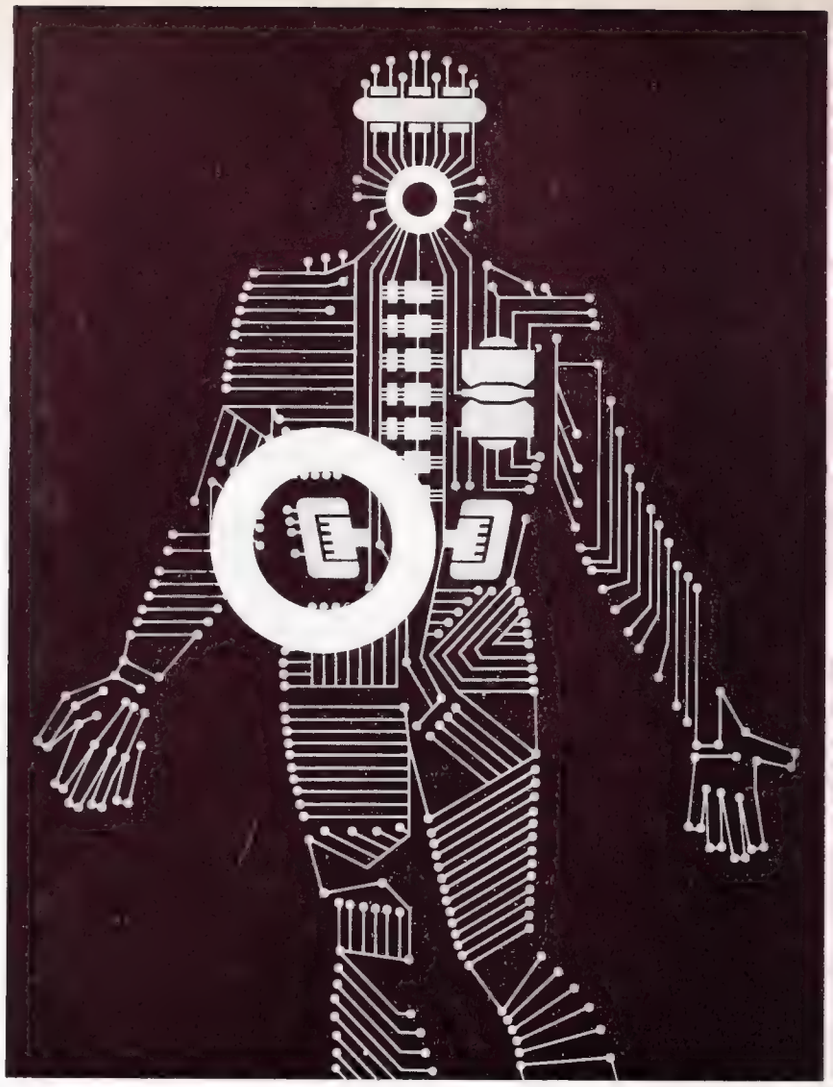

Catapres lowers blood pressure without compromising kidney function.

Onesti *et al.*[1] report, for example, that Catapres produced marked reductions in mean arterial pressure without significantly altering renal hemodynamics (see chart).

The investigators concluded: "This is an extremely favorable pharmacodynamic effect, especially in view of the fact that a decrease in renal blood flow and glomerular filtration rate ordinarily follows acute blood pressure reduction."[1]

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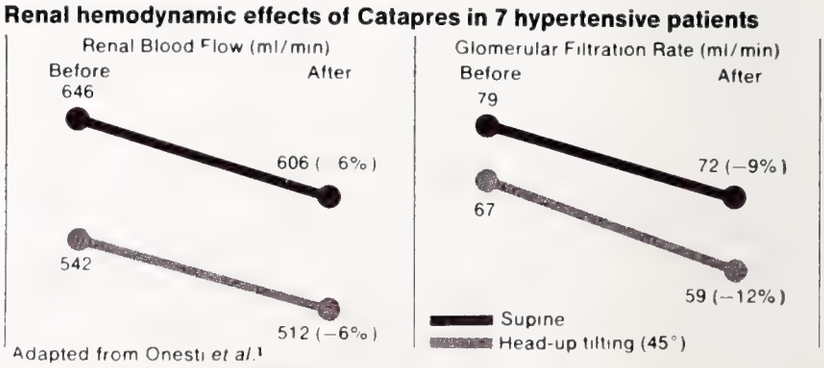

Adapted from Onesti *et al.*[1]

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Indication: The drug is indicated in the treatment of hypertension. As an antihypertensive drug, Catapres (clonidine hydrochloride) is mild to moderate in potency. It may be employed in a general treatment program with a diuretic and/or other antihypertensive agents as needed for proper patient response.

Warnings: Tolerance may develop in some patients necessitating a reevaluation of therapy.

Usage in Pregnancy: In view of embryotoxic findings in animals, and since information on possible adverse effects in pregnant women is limited to uncontrolled clinical data, the drug is not recommended in women who are or may become pregnant unless the potential benefits outweigh the potential risk to mother and fetus.

Usage In Children: No clinical experience is available with the use of Catapres (clonidine hydrochloride) in children.

Precautions: When discontinuing Catapres (clonidine hydrochloride), reduce the dose gradually over 2 to 4 days to avoid a possible rapid rise in blood pressure and associated subjective symptoms such as nervousness, agitation, and headache. Patients should be instructed not to discontinue therapy without consulting their physician. Rare instances of hypertensive encephalopathy and death have been recorded after cessation of clonidine hydrochloride therapy. A causal relationship has not been established in these cases. It has been demonstrated that an excessive rise in blood pressure, should it occur, can be reversed by resumption of clonidine hydrochloride therapy or by intravenous phentolamine. Patients who engage in potentially hazardous activities, such as operating machinery or driving, should be advised of the sedative effect. This drug may enhance the CNS-depressive effects of alcohol, barbiturates and other sedatives. Like any other agent lowering blood pressure, clonidine hydrochloride should be used with caution in patients with severe coronary insufficiency, recent myocardial infarction, cerebrovascular disease or chronic renal failure.

As an integral part of their overall long-term care, patients treated with Catapres (clonidine hydrochloride) should receive periodic eye examinations. While, except for some dryness of the eyes, no drug-related abnormal ophthalmologic findings have been recorded with Catapres, in several studies the drug produced a dose-dependent increase in the incidence and severity of spontaneously occurring retinal degeneration in albino rats treated for 6 months or longer.

Adverse Reactions: The most common reactions are dry mouth, drowsiness and sedation. Constipation, dizziness, headache, and fatigue have been reported. Generally these effects tend to diminish with continued therapy. The following reactions have been associated with the drug, some of them rarely. (In some instances an exact causal relationship has not been established.) These include: Anorexia, malaise, nausea, vomiting, parotid pain, mild transient abnormalities in liver function tests; one report of possible drug-induced hepatitis without icterus and hyperbilirubinemia in a patient receiving clonidine hydrochloride, chlorthalidone and papaverine hydrochloride.

Weight gain, transient elevation of blood glucose, or serum creatine phosphokinase; congestive heart failure, Raynaud's phenomenon; vivid dreams or nightmares, insomnia, other behavioral changes, nervousness, restlessness, anxiety and mental depression. Also rash, angioneurotic edema, hives, urticaria, thinning of the hair, pruritus not associated with a rash, impotence, urinary retention, increased sensitivity to alcohol, dryness, itching or burning of the eyes, dryness of the nasal mucosa, pallor, gynecomastia, weakly positive Coombs' test, asymptomatic electrocardiographic abnormalities manifested as Wenckebach period or ventricular trigeminy.

Overdosage: Profound hypotension, weakness, somnolence, diminished or absent reflexes and vomiting followed the accidental ingestion of Catapres (clonidine hydrochloride) by several children from 19 months to 5 years of age. Gastric lavage and administration of an analeptic and vasopressor led to complete recovery within 24 hours. Tolazoline in intravenous doses of 10 mg at 30-minute intervals usually abolishes all effects of Catapres (clonidine hydrochloride) overdosage.

How Supplied: Catapres, brand of clonidine hydrochloride, is available as 0.1 mg (tan) and 0.2 mg (orange) oval, single-scored tablets in bottles of 100.

For complete details, please see full prescribing information.
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Reference: 1. Onesti, G. *et al.*: Pharmacodynamic effects of a new antihypertensive drug, Catapres (ST-155). Circulation **39:**219, 1969.

108th Annual Session of the
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May 1-4, 1975
San Antonio

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PLAN NOW TO ATTEND

NEWS

Prominent guest speakers to highlight Annual Session

Thirty-five prominent medical leaders have been secured to date as guest speakers for the 1975 TMA Annual Session in San Antonio, May 1-4.

The invitees include two physicians from other continents, Dr. D. F. N. Harrison of London, England, and Dr. Harry V. Crock of Melbourne, Australia.

Currently, Dr. Harrison is professor of laryngology and otology at the University of London. He also serves as director of the professorial unit of the Royal National Throat, Nose and Ear Hospital in London. A renowned lecturer, Dr. Harrison has corresponding memberships in societies in Australia, New Zealand, Denmark, the United States, Ireland, Jamaica, and other countries. He serves on the editorial boards of a number of international journals and has authored chapters in medical textbooks and over 60 papers.

Dr. Crock was a Nuffield scholar from Australia to England and spent several years at Oxford University. His interest in the work on the blood supply of bone resulted in his publishing a book six years ago entitled, "The Blood Supply of the Lower Limb Bones in Man." He is currently working on a similar book which is to clarify the blood supply of the spine in man.

Among out-of-state speakers are Dr. M. R. Gomez of Rochester, Minn, and Dr. Donald L. Cooper of Stillwater, Okla.

Dr. Gomez is associate professor of pediatric neurology at the Mayo Graduate School of Medicine. Among his numerous professional involvements, he is a founding member of the International Child Neurology Society and a member of the program committee for the First International Congress of Pediatric Neurology to be held in Toronto in 1975. Dr. Gomez is also a member of the Research Group on Developmental Dyslexia and World Illiteracy of the World Federation of Neurology.

Dr. Cooper, director of the Oklahoma State University Health Center and team physician, was the first recipient of the National Athletic Trainers Association's President's Challenge Sports Medicine Award in June of this year. Dr. Cooper, who served as team physician to the US Olympic team in Mexico City in 1968, has many activities, honors, and publications in the area of sports medicine to his credit.

New insurance option available

A new option under the Texas Medical Association's group major medical plan for physicians became effective Nov 1.

Known as the "Comprehensive Plan," it provides flexibility and a more equitable arrangement for payment of professional fees. Dr. Richard L. Vardy, chairman of the Committee on Association Insurance Programs, feels that the new plan constitutes the "complete package" for health insurance which was requested by many members.

After satisfaction of a $300 deductible in a calendar year, the plan pays 80% of eligible expenses up to $5,000 and 100% thereafter during the remainder of the calendar year.

Eligible expenses include hospital room and board, other hospital services, private duty nurses in or out of the hospital, and prescription drugs, rentals, and so forth, outside the hospital. Doctors' charges are covered for non-surgical and surgical confinements, and home and office visits.

Only one deductible applies to each person in a calendar year and when two persons in a family satisfy the deductible, no deductible is applied to covered expenses incurred by other family members during that calendar year. Dr. Vardy also said that no deductible applies to covered expenses incurred due to accident.

The lifetime maximum is $250,000 per individual. Newborn children are covered from birth. The lifetime maximum for loss due to mental illness is $20,000 per individual. The outpatient professional fee for mental illness is 50% of the fee with a maximum payment per visit of $20 and $2,000 annually. All other eligible expenses for mental illness are paid at 80%.

A complete plan description and rates are available through the TMA insurance service office.

Physicians interested in the new option will be required to submit an application even though they may be already insured for TMA major medical coverage. The customary age and underwriting qualifications apply.

Conference highlights on audio cassettes

Audio cassette highlights of the Texas Medical Association's 1974 Conference on Medical Service and Practice Management are now available on a two-week loan basis through the TMA film library.

The two professionally edited and produced 90-minute tapes are entitled "Key Issues Confronting Medicine" and "Practice Management in Medicine." The first presents a full discussion on national health insurance, health maintenance organizations, and professional standards review organizations. The second tape highlights speeches on practical problems of medical practice which were presented by management authorities.

Loan requests should be mailed to the TMA film library at TMA headquarters. The requests will be processed as quickly as possible according to the availability of the library loan cassettes. The cassettes may also be purchased, either separately or as a package. Individual tapes are $4.50; the set, $8. Purchase orders should be mailed to the TMA Public Relations Division.

'Feeling Good' premieres

"Feeling Good," the new adult television series on health, premiered Nov 20 on the 250 stations of the Public Broadcasting Service.

The prime-time show is produced by the Children's Television Workshop, creators of "Sesame Street."

"Feeling Good" has a variety/magazine format composed of a number of different elements and employing a wide range of entertainment and informational techniques such as drama, song, comedy and satire, animation, and documentaries.

The theme is prevention, and the objective is increased public awareness of good health practices and personal responsibility for one's own well being. The series stresses self-help ideas; how to stay well, how not to get sick; the fact that most people have more control over their health than they realize.

The following are the major topics to be covered in upcoming segments: Dec 4, cancer, immunization, high blood pressure, dental care, exercise; Dec 11, alcohol abuse, parenting, patients' rights, nutrition; Dec 18, allied health personnel, accident prevention, medical emergencies, nutrition, and cancer.

A. Webb Roberts Center receives education grants

The A. Webb Roberts Center has received grants for continuing education in health sciences totaling $108,437.

The center serves as the joint continuing education department for Baylor University Medical Center and The University of Texas Southwestern Medical School at Dallas.

The funds include: $37,323 from Texas Commission on Alcoholism for continuing education programs on alcohol abuse addressed to physicians and nurses; $39,363 from the Regional Medical Program of Texas for a statewide perinatal program; and

NEWS

$31,751 also from the Regional Medical Program of Texas for a pilot program to provide continuing education programs for laboratory personnel in medical technology.

New schedule released for gonorrhea treatment

The Center for Disease Control recently released a new comprehensive recommended treatment schedule for gonorrhea.

Published in the CDC's "Morbidity and Mortality" report dated Oct 5, the schedule covers treatment of both uncomplicated and complicated cases of the disease.

The recommendations deal with the drug regimen of choice, alternate regimens, treatment of sexual partners, followup, treatment failures, postgonococcal urethritis, pharyngeal infection, and syphilis.

Also included is treatment of gonorrhea in pregnant patients, acute salpingitis, disseminated gonococcal infection, and gonococcal infection in pediatric patients.

The report may be obtained from the CDC, US Department of Health Education, and Welfare, Public Health Service, Atlanta, Ga 30333, or the Bureau of Communicable Disease Services, Texas State Department of Health, Austin 78756.

Legislative conference scheduled for Jan 18

Plans are under way for the Texas Medical Association's Conference on Legislation and Medical Service Jan 18 at the Joe C. Thompson Conference Center in Austin.

A major session of the conference will be devoted to national health insurance which is expected to be a key congressional issue in 1975. There will also be a feature presentation on national health planning legislation.

A panel session will cover topics of state legislative interest such as lay control of health maintenance organizations, amendments to present licensing acts, drug substitution bills, and proposed new medical schools. Leading public officials have been invited as guest speakers.

The afternoon session will feature "curbstone consultations," informal round table discussions of various legislative issues.

Other activities include a hospitality hour, orientation for new TMA members, and winter meetings of TMA boards, councils, and committees.

Medicine ranks high in public esteem

Medicine's leadership continued to top all institutions in public esteem, according to a Louis Harris poll conducted in September.

Fifty percent of those polled said they had "a great deal of confidence" in the people "running" medicine. The poll represented "a cross-section of national opinion."

However, the figure represents a seven point drop in confidence in medicine in a year.

Ranking next in confidence were the US Supreme Court and colleges, both with 40%.

Correction

An error appeared in a scientific article published in the November, 1974, issue of *Texas Medicine*. The article, "Standard Versus Experimental Surgical Procedures in the Treatment of Duodenal Ulcer," was by Dr. James C. Thompson. On page 56, right column, the third paragraph should read:

"Although higher gastrin response to food had been reported after selective proximal vagotomy,[44] we have found no difference in the postoperative gastrin response to food between patients with and without drainage (Fig 5).

Inhalation therapy services surveyed in 47 hospitals

A study of the delivery of inhalation therapy services in hospitals was recently conducted by program evaluation teams in six regional offices of the Department of Health, Education and Welfare.

General findings include a trend among hospitals to establish inhalation therapy departments which are independent from both the departments of anesthesia and nursing. Of 47 hospitals visited, 45 maintained inhalation therapy departments; the other two were in the process of establishing departments.

Four factors were identified as having influenced the increased utilization of inhalation therapy services: 1) identification of the etiology of certain respiratory diseases and the establishment of specific treatment and rehabilitative regimens; 2) increase in the number of personnel trained to administer inhalation therapy services; 3) technological improvements and complexity of equipment designed to treat respiratory diseases; and 4) increased awareness of utilization of inhalation therapy services by physicians.

The study found that most of the inhalation therapy administered by the hospitals was to in patients with outpatient service minimal. The size of the hospital usually reflected the extent of sophistication and the level and amount of inhalation therapy service administered as well as the equipment available. Staffing varied from round-the-clock to part-time coverage and "on call" services.

Specific findings covered such areas as department supervision, procedure manuals, stop-order policies, routine orders, utilization review, medical records, and others.

Recommendations of the study included the establishment of standards detailing criteria to be met by the inhalation therapy departments, formalized contracts between providers and suppliers of service, guidelines for use by intermediaries in reviewing inhalation therapy claims, and others.

TMA sponsoring media competition

For the 18th consecutive year, the Texas Medical Association is sponsoring the Anson Jones Award competition for excellence in communicating health information to the public.

Open to Texas newspapers, magazines, and radio and television stations, the competition is divided into eight separate categories. Each winner receives a $250 cash award and an engraved plaque.

Winning entries are selected on the basis of accuracy, significance, quality, public interest, and impact. Entries are reviewed by representatives from the fields of publishing, broadcasting, and medicine, with final winners selected by a panel of physicians.

The entry deadline is Dec 10, covering work which has been published or broadcast between Dec 1, 1973 and Nov 30, 1974. Award winners will be announced Feb 1, 1975 with award presentations being made during TMA's annual session in San Antonio in May.

The award is named in honor of Dr. Anson Jones, a pioneer Texas physician, distinguished writer, and former president of the Republic of Texas.

Name change adopted by group practice MDs

The American Association of Medical Clinics has changed its name to American Group Practice Association (AGPA).

Delegates to the 25th Annual Meeting of the national association representing group practice physicians and dentists voted overwhelming approval of the change.

Citing the frequent confusion surrounding the use of the term "clinic,"

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the general lack of a precise definition, and the lack of association identity arising from the use of the acronym "AAMC," the delegates voted to "call us what we are—an association of group practices."

Seminars to train medical directors

The American Medical Association will conduct a series of ten seminars in 1975 to train physicians to serve as medical directors in skilled nursing facilities.

The objective will be to provide a joint training experience for physicians, administrators, and nurses to enhance the ability of the physician to serve as a medical director, and that of the administrator and the director of nursing to assist the physician in this role.

To support the seminars the AMA has accepted a contract from the US Department of Health, Education and Welfare for $135,000. The seminars will be conducted by state medical societies with AMA-HEW financial and technical support.

The program will be designed to help facilities implement the new federal standards for certification of skilled nursing facilities. It is anticipated that the standards will require employment, part-time or full-time, of a medical director in a skilled nursing facility for it to participate in Medicare and Medicaid.

Bicentennial health ship to aid other countries

The International Bicentennial Health Ship Project is renovating a former US Navy hospital ship which will set sail from Boston on July 4, 1976 to take medical aid to people of underprivileged countries.

More than 300 physicians and 100 paramedical personnel have agreed to participate in this project, and a full maritime crew has already been recruited, without stipend, for the initial trip of the *SS Spirit of American Medicine*. During its first six-week voyage, the ship will sail to Guatemala, Haiti, and Brazil. The ship will continue its service to countries of Central and South America following the many bicentennial celebrations.

The project is the idea of Dr. Edward Graham Toomey of Concord, Mass. Dr. Toomey said the project also offers medical personnel the opportunity to study tropical health conditions. He said the ship is a private, nonprofit, voluntary, citizen inspired and financed effort.

The project has the support of the US Maritime Commission.

NEWS

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment media	Original price 9-30-68	Current adjusted price 9-30-74	% Change from 9-30-68
Mercantile National Bank Stock Fund	$10.25	$ 6.51	−36.5
Loomis-Sayles Capital Development Fund	14.20	8.41	−40.8
T. Rowe Price Growth Stock Fund[2]	25.93	8.38	−35.4
Loomis-Sayles Mutual Fund	16.82	12.69	−24.6
Stein Roe & Farnham Balanced Fund	23.34	17.49	−25.1
Mercantile Bank Fixed Income Fund	10.00	10.30	+ 3.0
Standard & Poor 500 Stock Average	101.34	63.54	−37.3
Dow Jones Industrial Average	935.79	607.87	−35.0

[1]Includes accumulated dividends and capital gains since 1968.
[2]Stock split two for one, May, 1973.

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CAPITAL COMMENTS

AUSTIN: HEARINGS ON HEALTH DELIVERY SYSTEMS. The Texas Senate and House Joint Subcommittee on Public Health held a hearing in Arlington Oct 3-4 to continue its study of alternative health care delivery systems in Texas. At this hearing the subcommittee appointed as advisory members two TMA physicians, Dr. Charles H. Howard, Richardson, and Dr. James T. Downs, Dallas. TMA members testifying before the subcommittee were Drs. Ronald C. Jones and Erwin R. Thal, both of Dallas. The two physicians testified in regard to emergency medical services in Dallas. Also testifying was Dr. Joseph T. Painter, Houston. Dr. Painter spoke at the committee's request on the provisions of the federal professional standards review organization (PRSO) law and the general area of quality assurance in a medical care system.
The subcommittee plans one additional out-of-Austin hearing in Houston Nov 7-8. The Houston hearing will emphasize certificate of need.

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: HOUSE COMMITTEE MODIFICATIONS. The House of Representatives has passed HR 988, the Committee Reform Amendments of 1974. Under the new system, the House Committee on Ways and Means will be divided into at least four subcommittees. Proxy voting will be abolished and one third of all committee staff funds will be allocated to the minority party. Legislative jurisdiction for all health programs not financed by payroll taxes will lie with the House Interstate and Foreign Commerce Committee, effective with the start of the 94th Congress next January. This will mean the transfer of such programs as Medicaid and Maternal and Child Health from the House Ways and Means Committee. Activities such as Hill-Burton, Comprehensive Health Planning, Health Manpower, and Community and Mental Health Centers will continue under the jurisdiction of the Interstate and Foreign Commerce Committee. The Ways and Means Committee will retain its responsibility for Medicare. In a further procedural change the Speaker of the House will now be able to refer legislation to one or more committees if the subject matter of the bill is within the jurisdiction of several committees. Adoption of the committee modification followed the rejection of a more sweeping reorganization plan sponsored by Rep Richard Bolling (D-Mo).

WASHINGTON: HEALTH PLANNING. As previously reported, HR 16204, the National Health Policy, Planning and Resources Development Act, has been reported from the House Interstate and Foreign Commerce Committee and is expected to be acted upon during the current session. Meanwhile, the Senate Labor and Public Welfare Committee has reported S 2994, known as the National Health Planning and Development and Health Facilities Assistance Act of 1974. This bill, similar to the pending House legislation, would also divide the country into health service areas and authorize public utility-type rate setting. A system

of health service agencies, working in conjunction with state agencies, would be responsible for both planning and development of health care services. The major difference in the Senate bill over the House bill is that the Senate bill would authorize public utility type rate setting. This provision makes the Senate bill even more objectionable than the House bill.

WASHINGTON: CONFERENCE BEGINS ON HEALTH-SERVICE ACT. Conferees of the House and Senate have begun to discuss HR 14214, the Health-Service Act of 1974. Included in this bill are provisions to extend federal support for community mental health centers, migrant health centers, specific authority for community health centers and block grant authority to the states to be used for public health services. The Senate-passed version of this legislation contains additional programs to establish more health services where they are not presently available, a commission on mental health and illness of the elderly, and a commission on epilepsy.

WASHINGTON: STATUS OF SOCIAL SECURITY TRUST FUNDS. Chairman Russell B. Long (D-La) of the Senate Finance Committee has named a six-member panel to review financial status of the Social Security Trust Fund. Long has charged the panel of actuarial and economic experts to evaluate the demographic, actuarial and economic assumptions on which the trust fund estimates are based. This panel is to report to the committee after the 94th Congress convenes.

WASHINGTON: PRIVACY, DATA COLLECTION STUDY. Douglas Lea, director of the American Civil Liberties Union project on privacy and data collection, recently told the National PSRO Advisory Council that the Union's files were crammed with privacy complaints involving abuse of medical information. Insofar as national health insurance is concerned, he said the American Civil Liberties Union is wary of health credit card ideas supported by the administration, the Kennedy-Mills, and other plans. He stated that since these cards would serve as identification, the code numbers would be automatic keys to quick access to medical records of each recipient.

WASHINGTON: MEDICARE INCREASE. Starting Jan 1, 1975, a person going into a hospital under Medicare will be responsible for the first $92 of his hospital bill. The increase in the deductible results from adjustments allowed by the law if an annual review of hospital costs reveals a substantial rise in hospital costs. The present deductible of $84 remains in effect through the rest of the year.

WASHINGTON: NEW LAW. The President has signed into law HR 9456, PL 93-422, extending the program of Alcohol and Drug Abuse Education.

WASHINGTON: FAIR MARKET TEST FOR HMOs. The Institute of Medicine has recommended major changes in federal and state laws so that developing HMOs may be subject to "fair market test." Major changes recommended by the committee included adoption by Congress of a federal law overriding restrictive laws so that state legislatures may be encouraged to adopt HMO enabling legislation; exemption of HMO outpatient facility construction from state certificate of need requirements and federal laws requiring approval of construction as a condition of reimbursement; consideration to be given to broadening physicians' powers to delegate responsibility to less highly trained personnel, and other changes.

The MUDRANES

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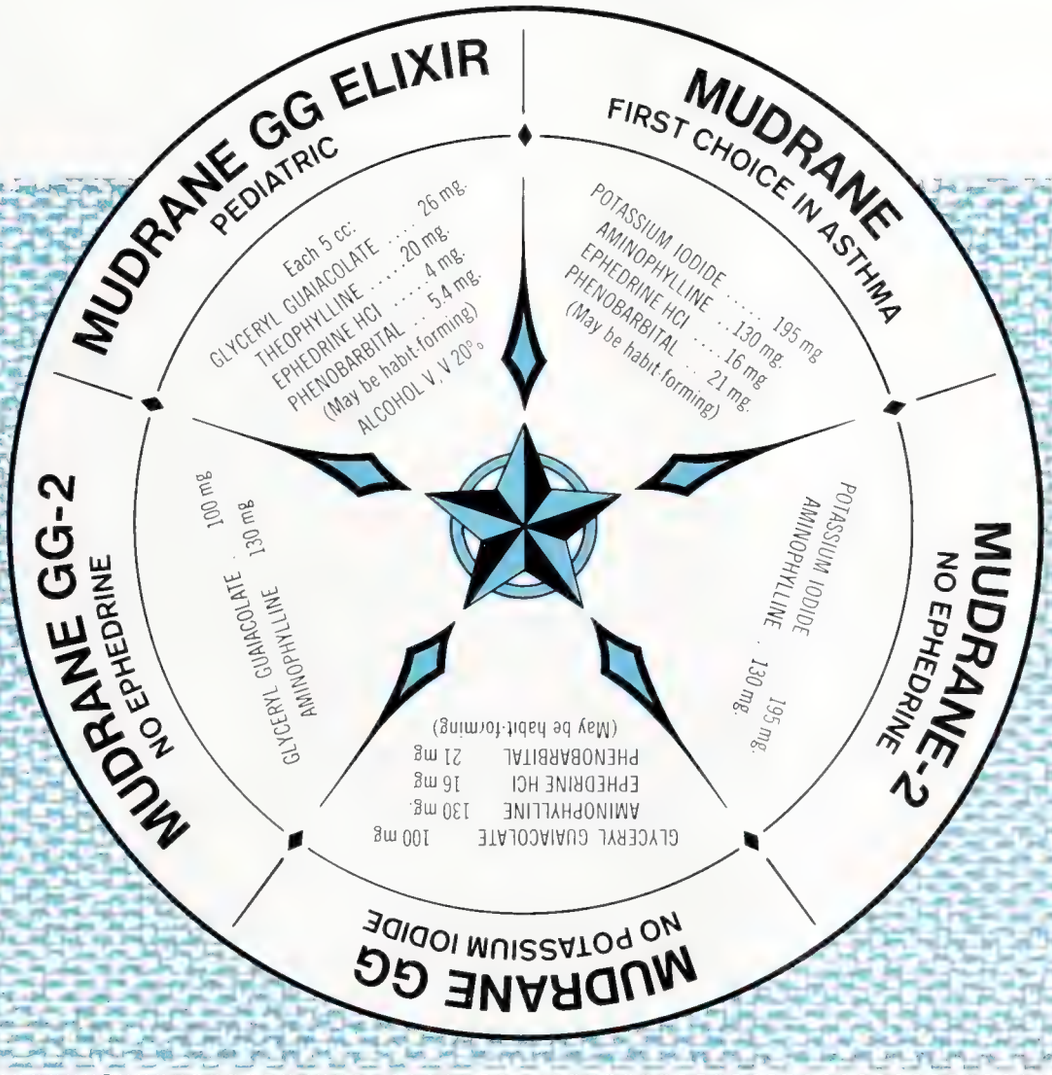

INDICATIONS: For the prompt symptomatic relief of bronchial asthma, emphysema and bronchiectasis. The Mudranes dilate the bronchi and liquefy mucus plugs. DOSAGE: Tablet; One tablet with a full glass of water 3 or 4 times daily as required. Divide tablet for child's dose. Elixir; Children, 1 cc for each 10 lbs. of body weight. May be repeated 3 or 4 times a day. Adult, one tablespoonful 4 times daily. All doses should be followed with a glass of water.

CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

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CONTINUING EDUCATION COURSES

DECEMBER

Auditing

Title: Medical Audit Team Seminar
Sponsor: Joint Commission on Accreditation of Hospitals
Location: San Antonio
Date: Dec 10-11, 1974
Contact: Carol Overman, educational project coordinator, JCAH, 875 N Michigan, Chicago 60611

Title: Nursing Workshops on Audit
Sponsor: Joint Commission on Accreditation of Hospitals
Location: San Antonio
Date: Dec 3-4, 1974
Contact: Carol Overman, educational project coordinator, JCAH, 875 N Michigan, Chicago 60611

General Medicine

Title: Immediate Care of the Traumatized Patient
Sponsor: UT Health Science Center at Houston
Location: UT Health Science Center at Houston
Dates: Nov 26, 1974-Jan 14, 1975
Contact: Dr. Grant Taylor, Division of Continuing Education, UT Health Science Center at Houston, PO Box 20367, Houston 77025

Internal Medicine

Title: Cardiology Symposium
Sponsors: UT Health Science Center at Houston
Location: UT Medical School at Houston
Date: Dec 3-5, 1974
Guest Speaker: Dr. Bernard Lown, Professor of Cardiology, Dept of Nutrition, Harvard School of Public Health, Boston
Contact: Office of the Director, UT Health Science Center at Houston, Division of Continuing Education, PO Box 20367, Houston 77025

Title: Advances in Analytical Toxicology
Sponsors: Institute of Clinical Toxicology, Houston
Location: Marriott Motor Hotel, Houston
Date: Dec 9-11, 1974
Fee: $100
Contact: Dr. Eric G Comstock, Director, Institute of Clinical Toxicology, PO Box 2565, Houston 77001

Title: Advances in Diagnosis and Treatment in Clinical Medicine
Sponsor: American College of Physicians
Location: Los Angeles Marriott Hotel
Date: Dec 2-6, 1974
Contact: Registrar, Postgraduate Courses, ACP, 4200 Pine St, Philadelphia, Pa 19104

Title: 11th Annual Postgraduate Pulmonary Function in Health and Disease
Sponsors: American Thoracic Society of Louisiana
Location: Tulane University Medical School Auditorium, New Orleans
Date: Dec 9-12, 1974
Fee: $135
Credit: AAFP; Category I, AMA Physician's Recognition Award
Contact: Course Coordinator, ATS of Louisiana, 333 St. Charles Ave, Suite 1504, New Orleans 70130

Title: Endocrinology for the Practicing Physician
Sponsor: University of Kentucky Medical Center
Location: University of Kentucky Medical Center, Lexington, Ky
Date: Dec 20-21, 1974
Fee: $75
Contact: Dr. Frank R Lemon, Continuing Education, College of Medicine, University of Kentucky, Lexington 40506

Otolaryngology

Title: Postgraduate Course in Otolaryngology for the Primary Care Physician
Sponsors: The Division of Otolaryngology of The University of Texas Health Science Center at Dallas; Roberts Center for Continuing Education
Location: Callier Hearing and Speech Center, 1966 Inwood Rd, Dallas
Date: Dec 6-7, 1974
Fee: $110—Private practitioners
$75—Residents in training
Credit: 10 elective hours AAFP and AAEP; Category I, AMA Physician's Recognition Award
Contact: Roberts Center for Continuing Education, 3500 Gaston Ave, Dallas 75246

Pediatrics/General Medicine

Title: Upper and lower respiratory tract diseases in children
Sponsor: Creighton University School of Medicine
Location: Omaha, Neb

Date: Dec 6-7, 1974
Credit: 6 prescribed hours AAFP
Contact: Coordinator for Continuing Medical Education, Creighton University, Omaha, Neb 68178.

JANUARY

Family Practice

Title: Trauma
Sponsor: Texas Academy of Family Physicians
Location: Snowmass, Colo
Date: Jan 26-Feb 1, 1975
Speakers: Drs. John Derrick and W J Jinkins, Jr
Fee: $75
Credit: 20 Prescribed hours, AAFP
Contact: Donald C Jackson, TAFP, 1905 N Lamar Blvd, Austin 78705

General Medicine

Title: Human Disease Related to Food and Chemical Sensitivity
Sponsors: University of Miami School of Medicine; the Miller Foundation, Inc.
Location: Americana Hotel, Bal Harbour, Fla
Date: Jan 29-31, 1975
Fee: $150 Practicing physicians
$450 Physicians in training
Credit: 17½ hours, Category I, AMA and FMA
Contact: Division of Continuing Medical Education, University of Miami School of Medicine, P O Box 520875 Biscayne Annex, Miami 33152

Internal Medicine

Title: Medical and Surgical Therapy of Adult Heart Disease
Sponsors: American College of Physicians; University of California at Los Angeles; Cedars-Sinai Medical Center
Location: Century Plaza Hotel, Los Angeles
Date: Jan 16-18, 1975
Contact: Registrar, Postgraduate Courses, SCP, 4200 Pine St, Philadelphia, Pa 19104

Obstetrics/Gynecology

Title: Current Obstetric and Gynecological Practice
Sponsor: Dept of Obstetrics and Gynecology, The University of Texas Health Science Center at San Antonio
Location: UT Medical Health Science Center at San Antonio
Date: Jan 30-Feb 5, 1975
Fee: $250
Contact: Dr. C J Pauerstein, Dept OB-GYN, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Pediatrics

Title: Seminar in Pediatric Nephrology
Sponsor: Dept of Pediatrics, University of Miami School of Medicine
Location: American Hotel, Bal Harbour, Fla
Date: Jan 2-7, 1975
Fee: $175—Practicing physicians
$75—Physicians in training
$100—Nurses and other allied health professionals
Contact: Division of Continuing Medical Education, University of Miami School of Medicine, P O Box 520875 Biscayne Annex, Miami 33152

Pediatrics/Chest Diseases

Title: Postgraduate Pediatric Pulmonary Course
Sponsors: American Thoracic Society of Louisiana; medical section, Christmas Seal Association
Location: Tulane University School of Medicine, New Orleans
Date: Jan 28-30, 1975
Contact: Course Coordinator, ATC of Louisiana, 333 St Charles Ave, Suite 1504, New Orleans 70130

Correction: "Urologic Management of Neurogenic Bladder, Incontinence, Impotence," listed in this section in the November Issue of *Texas Medicine*, is not scheduled for Dec 13-14 in Dallas. The course was conducted in 1973.

Accepted Concepts in Angina Therapy*

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***Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:
"Possibly" effective: When taken by the oral route, Isordil is indicated for the relief of angina pectoris (pain of coronary artery disease). It is not intended to abort the acute anginal episode, but is widely regarded as useful in the prophylactic treatment of angina pectoris.
Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.
Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.
Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

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CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.
WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**
Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)
Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.
Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)
All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.
Tetracyclines are present in milk of lactating women taking tetracyclines.
To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.
Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).
Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.
Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.
USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.
For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.
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Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.
Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.
Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.
In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.
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Opinion & Dialogue

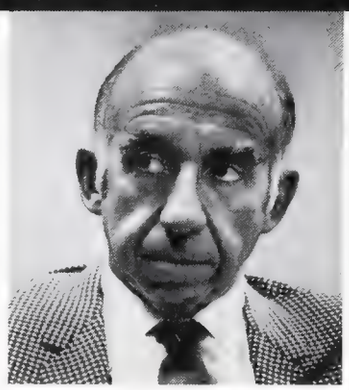
The Role of the Detail Man

Dr. Willard Gobbell
Family Physician
Encino, California

"I may be prejudiced, but I ar very much in favor of the detail me I meet. Most of them are knowledg able about the drugs they promote and can be a great help in acquain ing me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most o the men who visit me regularly and they in turn have become aware of my particular interests and the na ture of my practice. They, there fore, limit their discussion as muc as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealin with health problems in this count there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of con tact that people in a medical cente research people, and academic people have and that's in all likelih on a somewhat different level from that of the practicing physician.

Let me touch on how I person ally perceive the role of the sales representative. These men reach large numbers of health profes sionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real edu cational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientific ally sound and therefore truly use ful—as well as some excellent film produced by the pharmaceutical industry. When they function in thi

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

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capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

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COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION

The 28th AMA Clinical Convention will be held Nov 30-Dec 3 at Memorial Coliseum, Portland, Ore. The program will include scientific general sessions in human sexuality, hypertension, obesity, and total parenteral nutrition; postgraduate courses in tumor chemotherapy, pulmonary function, blood gases, infectious diseases and antibiotics, basic and advanced electrocardiography, pediatric emergencies, office gynecology, and immunology; scientific exhibits of fractures, live teaching clinics, and cardiopulmonary resuscitation; and film symposia. Special activities will provide postgraduate courses in public speaking and writing for scientific journals. Conferences being sponsored are the 16th National Conference on the Medical Aspects of Sports and a Medical Services Conference.

Contact: American Medical Association, 535 N Dearborn St, Chicago 60610.

AMERICAN COLLEGE OF PHYSICIANS

Texas specialists in internal medicine and related medical fields will hold a three-day scientific meeting Dec 5-7 at the Flagship Hotel in Galveston. The North and South Texas Regional Meeting of the ACP is designed to bring physicians up-to-date on late developments in the field of internal medicine.

Contact: Dr. Robert Hettig, Baylor University College of Medicine, 1200 M D Anderson Blvd, Houston 77025.

AMERICAN MEDICAL WOMEN'S ASSOCIATION

The annual meeting of the American Medical Women's Association will be conducted Nov 30-Dec 3 at the Houston Oaks Hotel in Houston. Activities will include a scientific session, meetings of the AMWA executive board and house of delegates, and various social functions. A five day post-meeting tour and continuing education program will depart for Acapulco, Mexico Dec 4.

Contact: Dr. Claudine Moss Gay, 403 E Capitol St, Washington, D C 20003, VPres.

CURRENT MEETINGS IN TEXAS

TEXAS MEDICAL ASSOCIATION'S Conference on Legislation and Medical Service is slated for Jan 18 at the Joe C Thompson Conference Center in Austin. Sessions will focus on current legislative issues such as national health insurance and national health planning. A panel session will be devoted to state legislative proposals. The afternoon session will feature "curbstone consultations" for the informal discussion of various legislative topics of interest. Contact: C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Sec.

SOUTHWESTERN GYNECOLOGIC ASSEMBLY will meet Dec 5-7 at the Sheraton-Dallas Hotel in Dallas. "Total Management of the Surgical Patient" will be the theme of the program. The assembly has been accredited by the Council on Medical Education of the American Medical Association. Contact: Dr. Marvin Gerard, 670 W Arapaho, Suite 2, Richardson, 75080, Chrmn.

SAN ANTONIO SOCIETY OF PATHOLOGISTS, in conjunction with the American Cancer Society, will sponsor the 31st Annual Tumor Seminar Dec 7 at the auditorium of The University of Texas Medical School at San Antonio. Featured speaker will be Dr. Walter Bauer, professor and head, Department of Surgical Pathology, Washington University School of Medicine, St. Louis Mo. Contact: Tumor Seminar, Department of Pathology, University of Texas Medical School at San Antonio, 7703 Floyd Curl Dr, San Antonio 78229.

CURRENT NATIONAL MEETINGS

AMERICAN MEDICAL ASSOCIATION will sponsor the 1974 Air Pollution Medical Research Conference Dec 5-6 at the San Francisco Sheraton-Palace Hotel. Latest research findings on the impact of air pollution on the nation's health will be presented at the conference. Topics will include studies on the effect of air-borne materials on immunology, hypersensitivity to various air pollutants and their impact on heart disease, diseases of the central nervous system, illnesses of children, and respiratory diseases. The keynote address will be presented by Dr. Herschel E Griffin, dean of the Graduate School of Public Health of the University of Pittsburgh. Contact: AMA Department of Environmental, Public and Occupational Health, 535 N Dearborn St, Chicago 60610.

For other courses and symposiums, see Continuing Education Courses, pp 23-24.

Calendar of Listings

■ **Denotes Texas Meetings**

DECEMBER

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec 4-7, 1974. Mrs. Betty Suor, 1116 S 5th, Tacoma, Wash 98405, Exec Sec.

AMERICAN ACADEMY OF PSYCHOANALYSIS, Kingston, Jamaica, Dec 5-8, 1974. Dr. Joseph Barnett, 8 E 77th St, New York 11029.

AMERICAN MEDICAL SOCIETY ON ALCOHOLISM, San Francisco, Dec 11, 1974. Claire Osman, AMSA, 2 Park Ave, New York, NY 10016.

AMERICAN SOCIETY OF HEMATOLOGY, Atlanta, Dec 7-10, 1974. Charles B Slack, 6900 Grove Road, Thorofare, NJ 08086.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Dec 1-6, 1974. Miss Adele Swenson, 713 E Genesee St, Syracuse, NY 13210, Exec Dir.

SOUTHERN SURGICAL ASSOCIATION, Boca Raton, Fla, Dec 9-11, 1974. Dr. W Dean Warren, Emory University, Atlanta 30322, Sec.

■ TEXAS ACADEMY OF INTERNAL MEDICINE, Galveston, Dec 5, 1974. Dr. Tom W Duke, PO Box 3460, Amarillo 79106, Sec.

■ TEXAS SOCIETY OF INTERNAL MEDICINE, Galveston, Dec, 1974. Dr. Willis A Seyffert, Jr, 6006 N Mesa, #100, El Paso 79912, Sec-treas.

JANUARY

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, New York City, Jan 26-31, 1975. William Bevan, 1515 Massachusetts Ave, Washington, DC 20005, Exec Off.

■ AMERICAN COLLEGE OF SURGEONS, SOUTH TEXAS CHAPTER, Galveston, Jan 30-Feb 1, 1975. Dr. Peter B Fisher, 615 Medical Twrs, Houston, 77025.

SOUTHERN SOCIETY FOR PEDIATRIC RESEARCH, New Orleans, Jan 29-Feb 1, 1975. Dr. John R Montgomery, Department of Pediatrics, Baylor College of Medicine, Houston 77025.

■ TEXAS MEDICAL ASSOCIATION, Austin, Jan 17-19, 1975. C Lincoln Williston, 1801 N Lamar Blvd, Austin 78701, Exec Dir.

■ TEXAS SOCIETY OF PATHOLOGISTS, El Paso, Jan 24-26, 1975. Dr. John A Webb, 704 Medical Towers, Houston 77025, Sec.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, San Diego, Feb 15-19, 1975. James O Kelley, 225 E Michigan St, Milwaukee 53202, Exec Off.

AMERICAN ACADEMY OF FORENSIC SCIENCES, Chicago, David A Crown, Room 3517, State Dept, Washington, DC 20520, Pres.

■ AMERICAN COLLEGE OF CARDIOLOGY, Houston, Feb 10-13, 1975. William D Nelligan, 9650 Rockville Pike, Bethesda 20014, Exec Off.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, Orlando, Fla, Feb 28-Mar 5, 1975. Dr. B F Alfano, 675 Main St, Melrose, Mass 02176, Sec.

■ INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS, San Antonio, Feb 27-28, 1975. S E Cockrell, Jr, 202 W French Pl, San Antonio 78212, Exec Off.

PAN-PACIFIC SURGICAL ASSOCIATION, Honolulu, Feb 15-21, 1975. Dr. John R Watson, 236 Alexander Young Bldg, Honolulu 96817, Chrmn of the Bd.

MARCH

AMERICAN ASSOCIATION OF ANATOMISTS, Los Angeles, Mar 23-27, 1975. Dr. John E Pauly, Dept of Anatomy, University of Arkansas Medical Center, Little Rock, Ark 72201, Sec-Treas.

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS, New Orleans, Mar 1, 1975. Robert E Learmouth, 9650 Rockville Pike, Bethesda, Md 20014, Adm Off.

AMERICAN COLLEGE OF RADIOLOGY, Portland, Ore, Mar 31-Apr 4, 1975. Sheila A McGing, 20 N Wacker Dr, Room 2920, Chicago 60606, Mtg Mgr.

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, Washington, DC, Mar 20-21, 1975. Mrs. Elaine Galasso, 1718 Gallagher Rd, Norristown, Pa 19401, Exec Sec.

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Miami Beach, Mar 2-7, 1975. Dr. John G Bellows, 30 N Michigan Ave, Chicago 60602.

■ DALLAS SOUTHERN CLINICAL SOCIETY, Dallas, Mar 17-19, 1975. Robert L Heath, 433 Medical Arts Bldg, Dallas 75201, Exec Dir.

■ NINTH DISTRICT MEDICAL SOCIETY, Livingston, Mar 20, 1975. Mrs. R C Torrence, 103 Jessie H Jones Library Bldg, Houston 77025.

■ SOCIETY OF NUCLEAR MEDICINE, SW CHAPTER, Galveston, Mar 21-23, 1975. Dr. Thomas P Haynie, 6723 Bertner Ave, Houston 77025, Sec-Treas.

■ TEXAS RADIOLOGICAL SOCIETY, Abilene, Mar 13-15, 1975. Dr. Francis Edw O'Neill, 1128 Nix Professional Bldg, San Antonio 78205, Sec-Treas.

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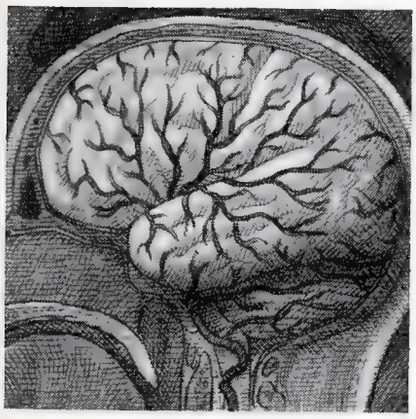

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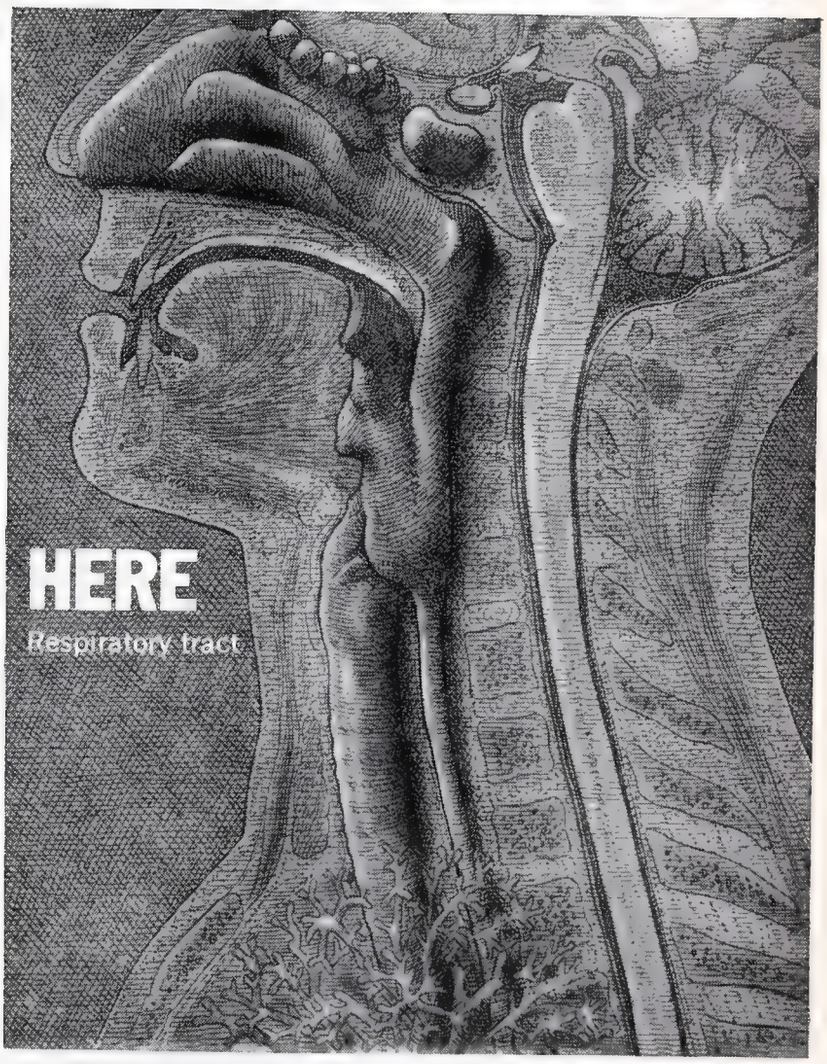

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Pathophysiology of osteoporosis: Implications for treatment

Robert P. Heaney, MD

Nature and Significance

Osteoporosis is the commonest of all the metabolic bone disorders. It afflicts about one-fourth of all white women over the age of 55 in this country and in Europe, and is the principal cause of fractures in the aged. The disorder consists simply in a reduction in the amount of normal bony material in the skeleton, without any other recognized abnormality of the bones themselves. Although its most important structural effects are in the vertebral bodies and the upper femora, the loss of bone affects all regions of the skeleton. A variety of osteoporoses is recognized, including those due to endocrine disorders (for example, Cushing's syndrome, hyperthyroidism), those due to nutritional disorders (for example, alcoholism in man, calcium deficiency in certain carnivores), and those due to immobilization and injury. Of most concern, and by far the largest group, are those cases designated "postmenopausal" or "senile" osteoporosis. It is to these that I shall confine my attention in this article.

The only known consequence of osteoporotic bone loss is fragility, in other words, fracture susceptibility. Pain is virtually always due to fracture or one of its consequences. No matter how "washed out" or radiolucent a bone may appear on x-ray, chronic bone pain, *without evidence of fracture,* almost always indicates the presence of some other disease, perhaps in addition to osteoporosis, but some other disease in any event. The most sinister consequence of osteoporotic fragility is fracture of the upper femur, which for many old people is a literally shattering experience. One-sixth of all patients with hip fractures die within three months of injury, and many more are permanently disabled in body or mind. The risk of sustaining a hip fracture, if one lives to age 90, is about one chance in five. This is a problem which will become increasingly severe as the age distribution of our population shifts toward the older groups.

The Problem of Defining Pathogenesis

The cause of postmenopausal and senile osteoporosis is not known. What is probable, however, is that there *is* no single cause and that postmenopausal osteoporosis is not a single disorder. Despite fairly homogeneous clinical features, this disease is almost certainly multifactorial in origin. This heterogeneity probably explains why no treatment to date has been shown convincingly to increase bone mass—or even to retard further bone loss—in patients who already have osteoporosis. The problem arises because it is not known how to separate the postmenopausal osteoporotic population into its subgroups. The agents tested have included estrogens, androgens, strontium, calcium (administered orally and intravenously), phosphate, fluoride, calcitonin, and diphosphonates. Even if some of these were effective in certain types of osteoporosis (and it seems likely that some may be), it is extremely difficult to establish efficacy when the treatment group is heterogeneous, in other words, when in addition to containing some patients who will respond it is loaded with patients who are not responsive to the specific agent being evaluated. Various physiological studies lead also to the conclusion that the disorder has multiple causes. Studies of such factors as customary calcium intake, dietary calcium absorption efficiency, urinary calcium excretion, serum antirachitic activity, vaginal cornification, corticosteroid excretion patterns, calcium-kinetics, and bone cell remodeling efficiency have all yielded ambiguous results.[1-12] Some investigators have found statistically

significant differences between osteoporotic and control groups, others have not. But two features of most such measurements stand out: the overlap with the normal is very broad, and the variance of the osteoporotic measurement is nearly always larger than the variance of the normal. This latter finding suggests that the osteoporotic group is multimodal, or heterogeneous.

Unfortunately, it is not known whether this physiological heterogeneity relates in any way to treatment response. In other words, it is not known whether the patients with low urine calcium values would respond differently to a particular treatment regimen than would the patients with normal urine calcium values, or whether the patients with low rates of bone mineral accretion would respond differently from the patients with normal rates. There obviously need to be better ways to classify these patients.

Nevertheless, the situation is not hopeless. We now recognize the probable heterogeneity of the disorder, and that is an important first step. Furthermore, our understanding of bone physiology has expanded enormously these past 20 years, such that it is now possible to set certain limits within which, it can be safely asserted, the operative causal mechanisms must work. In the remainder of this article, I will describe a model of osteoporosis development which operates within these limits, and will discuss certain implications for treatment which follow from this model.

Common Pathophysiological Elements

There are three major features which are held in common by the population-at-risk, and by their skeletons, and which establish virtual boundaries within which diverse etiologies must exert their effects. These are: (1) the fact of universal, age-related bone loss, and its temporal association with the menopause in women; (2) the restriction of osteoporotic bone loss to the endosteal envelope; and (3) the central position of calcium homeostasis in control of bone structural remodeling.

The Loss of Bone With Age

Peak bone mass is achieved at about age 35 in both men and women. Thereafter bone mass decreases, in both sexes, and in all races studied to date.[13] The rate of loss is faster in women than in men, and its onset coincides in general with the menopause, but it is nevertheless a universal phenomenon. It is not known for certain whether osteoporotic bone loss is distinct from age-related loss, or whether osteoporotics are simply a heterogeneous cluster of people on the bottom end of a normal frequency distribution, in other words, people with smaller adult bone masses to start with, who therefore cross the fracture threshold sooner than do those who start with heavy bone structures. In either event, any proposed mechanism for development of osteoporosis must take cognizance of the fact that everybody loses bone with age. This shifts the focus of attention from simple loss of bone toward losing more bone, or losing it faster, or starting with less, or toward the question of fracturing itself.

The Endosteal Envelope Phenomenon

Because the bony material is exterior to the bone cells, its remodeling must take place from the surfaces on which the cells active in remodeling reside. The cells on these surfaces, though cytologically indistinguishable from one surface to another, nevertheless behave in quite different ways, depending upon their location. For this reason these surfaces have been clas-

sified into three functional groups, or "envelopes": the *periosteal,* which lines the outside of all bones; the *endosteal,* which lines the marrow cavities and covers the trabeculae of cancellous bone; and the *intracortical,* or haversian, which lines the haversian canals within compact bone.[14]

In the normal adult most of the cells on these surfaces are inactive most of the time. Even the response to parathyroid-mediated demand for calcium normally involves only a small fraction of the available surface. Remodeling is by its nature an intrinsically local phenomenon, and is characterized, wherever it occurs, by an invariable, uniform sequence of local cellular events.[14] These consist first of activation of a localized subunit of the bone mesenchyme, then the formation of osteoclasts which subsequently erode the subjacent bone surface, then the replacement of the osteoclast population by osteoblasts derived from mesenchymal precursors; these osteoblasts deposit new bone on the previously eroded surface, and finally a resting stage is re-established. The time required to complete this sequence at each site is normally on the order of 9 to 15 months. Fig 1 graphically depicts the essential components of this sequence.

At the whole skeletal level the amount of formation at any point in time is approximately the same as the amount of resorption. This should not obscure the fact that the two activities are always unbalanced locally. At the local remodeling site resorption always occurs first, and formation later. As a consequence, a sudden increase in the number of remodeling sites leads to net calcium release from bone; conversely a sudden decrease leads to net calcium storage in bone. These changes are normally transient, but they nevertheless play an important part in, and have important consequences for, calcium homeostasis.

Although the remodeling *sequence* is exactly the same on all three of the bony envelopes, remodeling activity differs importantly from surface to surface in the balance between the resorption and formation components of the sequence. In the mature adult the periosteal envelope is predominantly a forming surface; in other words, although resorption starts the sequence, subsequent formation lays down more bone than was removed. As a result the external dimension of bones gets bigger with age. The endosteal surface, on the other hand, is predominantly a resorbing surface; in other words, the formation portion of the sequence restores less bone than was removed by resorption. As a result the marrow cavity expands with age. The intracortical envelope is normally balanced; in other words, what is taken out by resorption is subsequently replaced, virtually completely. In osteoporosis it is only the behavior of the endosteal envelope which is altered. The normal net excess of endosteal resorption over formation is significantly increased in these patients. As a result the cortex of long bones becomes thin and the trabeculae in cancellous bones become attenuated or disappear entirely. Significantly, remodeling at both the intracortical and periosteal surfaces remains normal. It is important to grasp the specificity of this phenomenon. Periosteal new bone growth, although slow after puberty, nevertheless continues until death. What is more interesting, it continues *normally* in patients who are developing osteoporosis.

Thus, to whatever extent it may be true that there is some abnormality of bone cell function in osteoporosis, it has become unmistakably clear that it is not all bone cells which are involved, not even all of one type. Indeed, location would seem to be the more important consideration. This fact raises important questions about marrow factors

and their possible influence on endosteally located bone mesenchymal cells. Such factors call to mind the highly localized periarticular osteoporosis of rheumatoid arthritis, which is almost certainly caused by local changes in marrow spaces adjacent to inflamed joints.

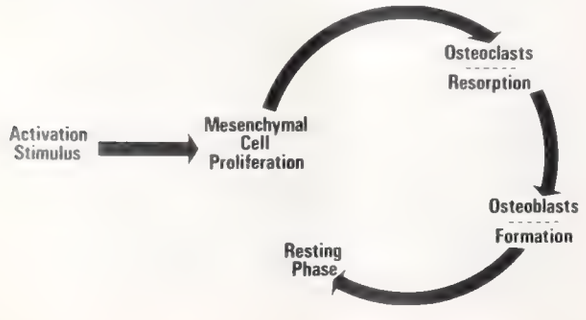
Centrality of Calcium Homeostasis

It is trivial, but still true, that resorption must exceed formation if osteoporosis is to develop in what was once a normal skeleton. It is also true that the size of this imbalance must be large enough to produce the 30-50% bone loss of osteoporosis in a reasonable number of years. In practical terms, this means an average loss from the skeleton of 50 mg calcium/day, sustained for 20 to 30 years, or 100 mg calcium/day sustained for 10-15 years.

What is not so generally understood is the fact that normal, minute-to-minute secretion of parathyroid hormone (PTH) is the major determinant of the quantity of bone remodeling in the adult. In hypoparathyroid patients remodeling falls to such low values that quantitatively significant imbalances cannot develop. Hence these patients are quite literally protected from osteoporosis. (Needless to say, parathyroidectomy would be a drastic form of prophylaxis for osteoporosis.) Quite clearly patients developing osteoporosis continue to secrete PTH. I do not claim that they oversecrete, as has sometimes been proposed; if anything, available evidence suggests that osteoporotics secrete less PTH than normal,[15] but secrete they do, and it is this continuous daily secretion which maintains bone remodeling at a level such that other factors, producing an imbalance between formation and resorption, are able to produce pathologically significant bone loss. Parathyroid secretion, in turn, is responsive to the calcium-homeostatic demands of the organism. It is thus that the calcium-homeostatic mechanisms provide a kind of final common pathway through which diverse agencies are able to influence bone balance.

All possible causes of osteoporosis must include explicit provision for the fact that all persons lose bone with age; that bone remodeling is carried out by bone cell groups, acting in an orderly sequence, on anatomic bone surfaces; that the disturbance in remodeling balance is confined to endosteally located cells; and that the most important regulator of the number of these remodeling loci is parathyroid hormone.

1. Sequence of events involved in remodeling of a local volume of bone. Even on free bone surfaces, resorption always precedes formation.



An Integrated Model of Osteoporosis Development

The Model

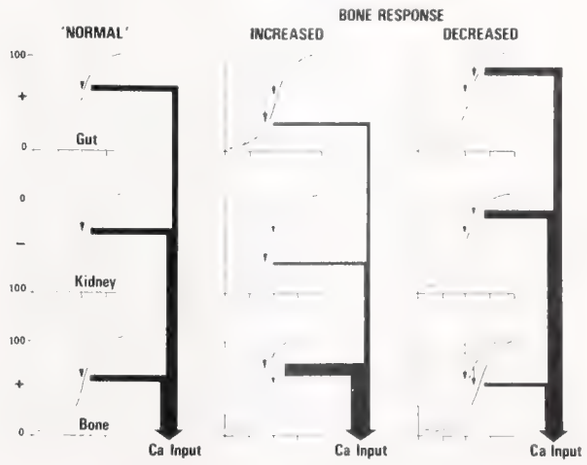
Nine years ago I proposed an osteoporosis model, based on the central role of calcium homeostasis, whose major feature consisted of differential alteration of end-organ responsiveness to endogenous PTH.[16,17] Testable predictions flowing from this model have all been verified to date. Hence the model still functions as a useful conceptual framework for further studies in this field. This model recognizes that PTH has three

principal end-organs by which it produces its effects in the feedback system which regulates extracelluar fluid [Ca^{++}]. These effects are: (1) *on the kidney,* by increasing tubular calcium absorption, hence reducing (or stopping altogether) renal calcium losses; (2) *on the intestine* (mediated through control of vitamin D metabolism), by increasing calcium absorption from the diet, and; (3) *on bone,* by activating bone remodeling units and hence transiently increasing calcium release from bone.

All three are easily seen to help sustain extracellular fluid [Ca^{++}] concentration. Nevertheless their relative contributions differ in significant ways. Although the renal effect is probably the most rapid, it obviously cannot elevate plasma calcium, but it does prevent further loss in the face of hypocalcemia. The intestinal effect, on the other hand, is capable of elevating the plasma calcium, but because it is the slowest it is not useful as an emergency mechanism. Furthermore it demands the presence of calcium-containing food in the intestine. The major significance of the intestinal effect lies rather in its adaptive character; it protects total body calcium balance (and hence bone balance) by providing better access to exogenous calcium sources whenever plasma calcium tends to fall.

The most important emergency mechanism is, of course, the bony effect. For minor, minute-to-minute calcium needs, this effect depends primarily upon a direct stimulation of osteocytes to remove calcium from their lacunar walls. But while this is happening the same PTH stimulates the formation of new remodeling units, and for larger calcium demands this mechanism is the more important. Recall that, from the point of view of bone balance, a remodeling unit first loses calcium and then only later gains it back. Hence a sud-

2. Schematic representation of coordinated activity of the three principal end-organs of parathyroid hormone. The algebraic sum of the three activities provides calcium input to the circulating fluids sufficient to offset obligatory output from those fluids. The renal effect is depicted as positive for purposes of simplicity; actually it represents a gain from a negative, or loss, position, which in direction of effect is the same as that of the other end-organs. (a). Left. The "normal," or reference position. (b). (Middle) The position which obtains when bony response is selectively enhanced relative to the "normal." (c). (Right) The position which obtains when bony response is selectively reduced relative to the "normal." End-organ response forms the ordinate, and PTH levels the abscissa of each dose-response curve. The solid arrow locates the operative PTH level and, from the dose response curve, the amount of effect it produces. The dashed arrows in b and c locate the reference PTH level from a; the dashed curve for bone in b and c locates the reference dose response curve from a.



den pulse of bone activation—a sudden increase in the number of remodeling foci—makes a lot of calcium available, at least temporarily. In the long run, skeletal integrity requires that the released calcium be put back. That is precisely where the effect on intestinal absorption would normally fit into the scheme.

So much is fact. What the model proposed is that in osteoporosis there is selective alteration of response to endogenous PTH at one or more of these end organs. Different factors acting on three different end-organs leave room for a wide variety of etiologies. Fig 2a schematically depicts how the three end-organs act in concert to meet daily stresses on calcium homeostasis. Each end-organ has its own dose response curve. Together the three provide an amount of calcium sufficient to meet daily demands upon the extracellular fluid calcium reservoirs, such as obligatory excretory losses, mineralization of new bone, and so forth. Interestingly, there is no known mechanism which ties these end-organs together for this concerted action, except the circulating level of parathyroid hormone. The amount of PTH secreted per day is simply the amount required to drive the three end-organs so as to maintain normal extracellular fluid [Ca^{++}] levels. The parathyroid glands cannot detect how much of the work each end-organ is doing. If one end-organ becomes resistive, more PTH must be secreted, and the other two, still normally responsive, are then driven harder to make up for the resistance of the first. Conversely if one becomes more responsive to PTH, then less PTH is needed overall, and the other two effectors can loaf along. Figs 2b and 2c illustrate these hypothetical changes for the bony end-organ. The same type of altered equilibrium could be visualized just as readily for the other two effectors.

The significance of these alterations lies not in their effect on [Ca^{++}] levels (which are maintained in any case) but in their effect on skeletal balance. For if the internal effector (bone) is less responsive than the external effectors (kidney and intestine) then net bone gain occurs; conversely, increased bone responsiveness leads to decrease in bone mass. It is exactly this type of change which the model postulates for all osteoporoses.

Selective Alteration of Bone Responsiveness

What is the evidence that responsiveness of the PTH effector organs can be selectively altered? When the issue is examined, it becomes clear that, rather than being a far-fetched possibility, such modulation of PTH responsiveness is an everyday event. Some of the more important factors which alter specifically the bony response include such agents as estrogens, heparin, fluoride, pO_2, pH, phosphate, calcitonin, and 1,25 hydroxycholecalciferol (the active form of vitamin D). As concentrations of these factors change locally (or systemically) bony response to parathyroid hormone changes as well. I shall concentrate on three of these: estrogens, heparin, and fluoride.

Good evidence relating to fluoride and heparin has been available for many years from tissue culture and whole-animal experiments.[18-20] Briefly, fluoride interferes with PTH-mediated resorption. Probably this is because it renders the mineral phase of bone more resistant to chemical attack by osteoclasts. In any case, in the calcium-deficient animal, fluoride treatment leads to an increase both in osteoclast numbers and in the amount of surface being eroded by each osteoclast. The total *volume* of bone resorbed is not increased; if anything it is decreased. The amount of work done

by each osteoclast is reduced and hence more osteoclasts must be called into play at any one time in order to maintain [Ca^{++}] levels. These changes are produced by increase in PTH secretion. Fig 3 illustrates this effect and suggests how bony overgrowth develops in fluoride-treated patients. This effect has obvious implications for osteoporosis treatment.

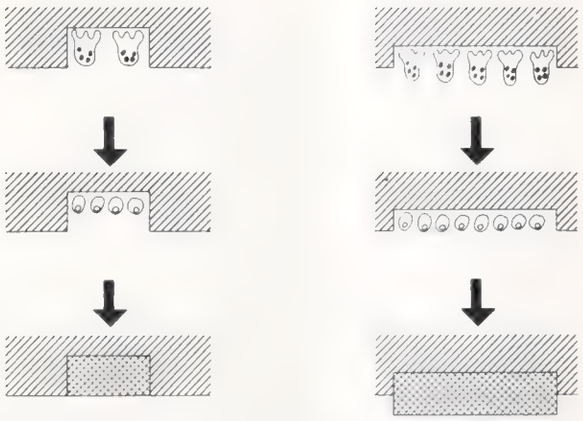
Heparin, on the other hand, enhances osteoclast response to parathyroid hormone in tissue culture. Clinical counterparts of this phenomenon may be seen in the heparin-osteoporosis observed in long-duration anticoagulant therapy and in most cell disease. Possibly of greater significance than these two clinical rarities is the endogenous location of the excessive resorption which characterizes osteoporosis, in other words, the relation between marrow and the endosteal envelope. There is some evidence of increased mast cells in the marrow of osteoporotic patients,[21] and it remains a distinct and even ironic possibility that at least some forms of osteoporosis may be more hematologic than osseous in character.

Estrogen is especially important, if for no other reason than because of the temporal relation of rapid bone loss in the female to the menopause. Far from being an osteoblast stimulator, estrogens actually depress bone remodeling. There has been good morphologic evidence for years that estrogen inhibits bone mesenchymal activation,[22] which is the first step in PTH-mediated resorption. This effect has obvious natural selective value in the female, for by increasing bony resistance to PTH, it forces better use of exogenous calcium, promotes positive calcium balance, and hence sets up internal reserves for ovulation, child bearing, and milk production. We postulated, when we proposed this model originally, that endogenous PTH levels would decrease after the menopause, because of removal of the natural parathyroid antagonism provided by estrogen, and that subsequent treatment with estrogen would lead to an increase in endogenous PTH levels. Just last year, Riggs and his colleagues reported exactly these changes.[15,23] This observation confirms the central tenet of the model, namely that PTH secretion will adapt itself to changes in effector organ responsiveness, and in the case of the bony effector, PTH will increase as response decreases, and decrease as response increases.

To sum up, these and similar changes appear sufficient to explain the imbalance between formation and resorption which must occur in the development of osteoporosis. We propose that factors such as those described, together with undoubtedly many others, interact to render certain persons more than normally sensitive to their own PTH. Thus the sexual predilection for postmenopausal women is seen to be due to withdrawal at menopause of a normal inhibitor of PTH action. This alone is probably not a sufficient explanation for osteoporosis, since not all women get the disorder, but it does explain why the disease is primarily found in women, and why it is primarily observed after menopause.

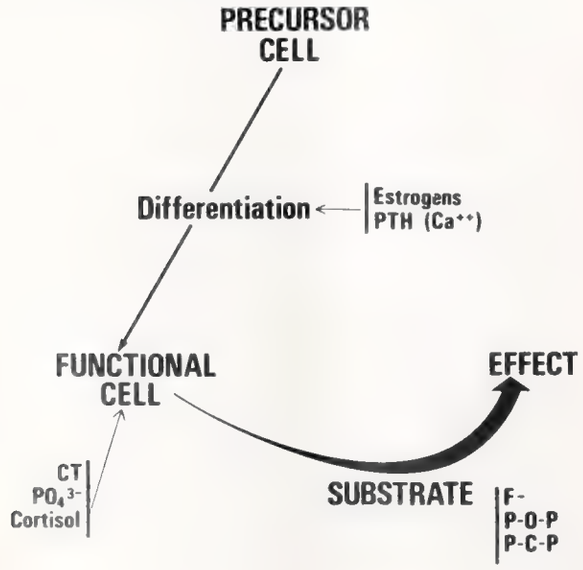
Implications for Treatment

Interaction of PTH stimulation with the bone remodeling sequence has important implications for treatment. There are, in the final analysis, only three fundamental ways to shift bone balance toward net formation. One is to decrease the number of remodeling sites. Estrogens and calcium supplements both do this, but the positive calcium balance effect is necessarily short-lived, and is based on the fact that formation follows resorption. Bone turnover is



3. Schematic representation of the effect of interference with osteoclast work on subsequent bone formation. On the left, "efficient" osteoclasts remove more bone per cell per unit time than do the "inefficient" osteoclasts on the right. Since calcium homeostatic needs are the same in the two situations, more osteoclasts must work on a greater surface area when the amount of work per osteoclast is reduced. When the resorption phase of remodeling is completed, more eroded surface is left behind by the inefficient osteoclasts. But osteoblast induction is determined by the amount of previously eroded bone surface. Thus, with no difference between osteoblast efficiency in the two situations, bone "overgrowth" is produced on the right.

4. Schematic representation of activity loci for principal classes of agents which alter bone resorption. In certain instances an agent may be active at more than one site; in such cases only the major locus is identified.



reduced by such treatment, and equilibrium is re-established in a few months, at which time the patient is once again back in her old balance, but now at a reduced level of remodeling.

A second way is to interfere with osteoclastic work at previously activated remodeling loci. Fluoride, calcitonin, pyrophosphate, the diphosphonates, and phosphate all do this. In some cases the action is on the osteoclast, in others on the bone substrate, but the effect is similar. PTH secretion goes up, more remodeling loci are initiated, and bone turnover is sustained at high enough levels to allow significant net gain. Uncertainty concerning the right dosage regimen and necessary supportive therapy, as well as possible effects of these agents on other bone cells, combine to render these agents still experimental. Fig 4 summarizes these activity loci graphically.

The third way is to alter the other PTH end organs to compensate for increased sensitivity of the bone. This is still largely unexplored territory. Growth hormone, both by stimulating bone formation and by enhancing intestinal calcium absorption, probably has just such an effect. In any case, growth hormone is of great interest in this disorder, for it is one of the few agents known which is capable of converting the adult endosteal envelope from a resorbing to a forming surface.[24] Phosphate seems to share this property to some extent.[25]

Prophylaxis

It is important to distinguish between prophylaxis and treatment. For example, estrogens have been clearly shown not to be effective as treatment, but there is good reason and suggestive evidence to indicate that they may be very useful as prophylaxis.[26] Which postmenopausal women should be treated? How much should they receive?

These are questions for which we have no answer. There is probably not sufficient reason to prescribe estrogens for all postmenopausal women in order to protect the 25% or so who seem most at risk.

Nutritionists argue for a higher calcium intake as effective prophylaxis. It is hard to be against this, but it is also hard to find any convincing epidemiologic relation between calcium intake and osteoporosis risk. Again, the problem of heterogeneity rears its head. It is possible that calcium intake is *the* critical factor for some women, but it is not possible at this time to say which women.

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Tibial condylar fractures: Long-term follow-up

Mason Hohl, MD

From a series of 917 tibial condylar fractures, 300 were followed two years or more and the results were analyzed by computer. Results were acceptable in 71% of the cases. Of significance in the results were that 32% of the knees failed to gain full extension, 55% failed to regain as much as 120° of knee motion, 15% had a moderate or severe degree of angular deformity, and 14% had moderate or severe instability as compared with the normal knee. Analysis of the six fracture types showed that results were more satisfactory in undisplaced, local compression, and total depression types, and less satisfactory in the split-compression, comminuted, and split fracture types.

Introduction

The value of follow-up studies in tibial condylar fractures has been established. New techniques of fracture management have been suggested and older ones modified as the result of detailed analyses reported in these series.[1-3,7-13,15-18] However, many problems remain, among which are the selection of optimal treatment and the effectiveness of this treatment in terms of the result. This study of 300 tibial condylar fractures followed 2 to 29 years' detailed analyses of important factors bearing on the result. A 100-point grading method is utilized to compare the result of closed or open treatment in different fracture types and displacements. Based upon results in this series, modifications of treatment are suggested for the care of tibial condylar fractures.

Materials

During the past 24 years, 917 tibial condylar fractures have been studied. This includes 726 cases reported in 1956[7] and 191 cases documented since then. Data processing methods were used for comprehensive analysis.* Two-year or longer follow-ups were available in 300 patients; the average length of follow-up was slightly longer than five years. I followed 74% of the patients; 51% were followed by other orthopedists, and 21% by orthopedic residents.

Method of Grading

A 100-point rating system was designed to provide a numerical figure reflecting the sum of the subjective result (30 points), functional result (45 points), and the anatomic result (25 points) (Fig 1).

Results

The mean rating of all cases was 75 points, with 26% rating 90 or above and 29% less than 70 (Fig 2). Relating the point value to a previously used grading system,[7] acceptable results were between the range of 70 and 100, and unacceptable results below 70.

Knee pain was noted by most of the patients, but in only 6% was it sufficient to limit walking. Decreased strength in the knee when walking was reported by nearly one-half of those followed.

Although knee motion was near normal in almost one-half the patients, 16% had less than 90° movement (Fig 3). Two-thirds of the patients achieved full knee extension, but the remainder never did so and walked with a bent-knee gait (Fig 4).

Forty percent of the knees showed no angular deformity, and valgus and varus

*Computing assistance was obtained from the Health Sciences Computing Facility, UCLA, sponsored by NIH Special Resources Grant RR-3.

angulation was present to some extent in the remainder (Fig 5). Twenty percent of the deformities were 15° or more. Normal knee stability was found in 42% of those examined. Where instability was found it varied from slight to severe, and exceeded 15° in 14% of the knees.

In general, with increasing years since injury, the point rating tended to improve slightly but not enough to be statistically significant. Twenty-one patients were again followed after an additional interval of at least two years since the original follow-up evaluation. The numerical rating remained essentially the same.

Results by Fracture Type

The six basic fracture types defined in an earlier publication[5] varied in numerical end result (Fig 6). The undisplaced and local compression types rated significantly better, while the comminuted and split types were worse than average (Fig 7).

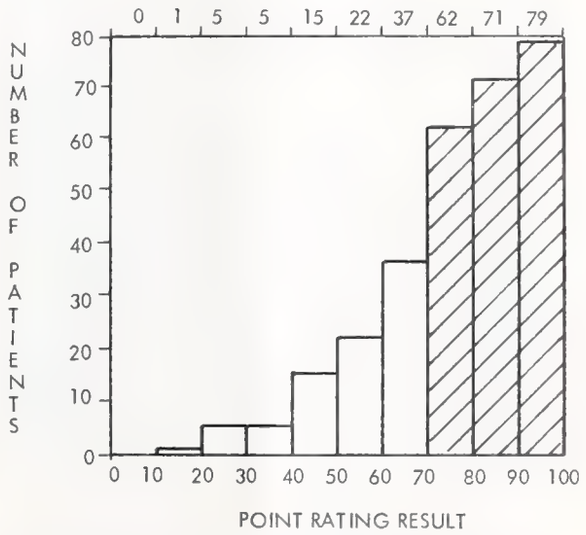
Undisplaced: The mean result was generally good with all forms of treatment. Several subtypes were identified relating to different fracture configurations. The subtypes resembling either a local compression or comminuted fracture type had a less than average result.

Local Compression: On follow-up, these fractures were remarkable in showing little difference in result regardless of the depth of depression. Operative treatment was better for depressions of 11 mm or less (Fig 8). The local compression fractures usually resulted in decreased stability and increased angular deformity (Fig 9). Surgical methods did not significantly improve stability or lessen angular deformity (Fig 10).

Split-Compression: After nonoperative treatment, the result was universally pro-

SUBJECTIVE	PAIN	20	30 POINTS
	WALKING STRENGTH	5	
	PATIENT'S EVALUATION	5	
FUNCTIONAL	RANGE OF MOTION	30	45 POINTS
	EXTENSION	10	
	LOCKING	5	
ANATOMIC	ANGULAR DEFORMITY	10	25 POINTS
	INSTABILITY	10	
	ARTHRITIS	5	
			100 POINTS

1. Method of point rating after tibial condylar fracture.

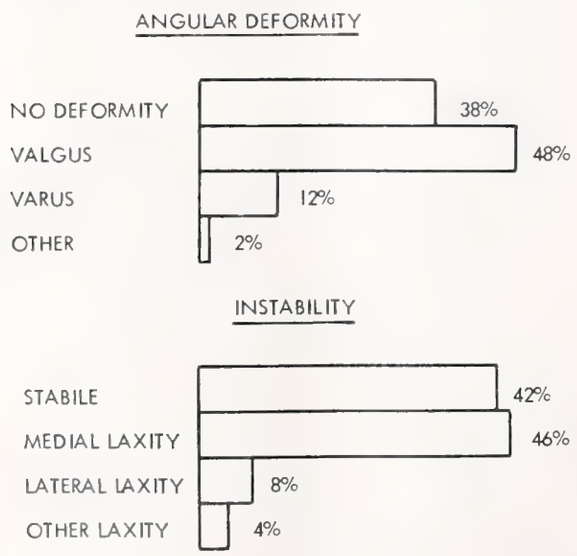


2. Overall point rating in 297 patients followed more than two years. Acceptable results are cross-hatched. (Complete data lacking in three patients.)

3. Range of motion and knee extension obtained in 300 patients with tibial condylar fractures followed for an average of five years.

4. Roentgenogram, 65-year-old woman, four years after comminuted fracture of the upper tibia. Despite obvious articular disruption and incongruity, traction treatment permitted full extension and 90° of motion with 10° of medial-lateral instability.

5. Residual angular deformity and instability at follow-up in 300 tibial condylar fractures.



portional to the amount of articular surface depression. The mean result with articular depression less than 11 mm was 80, but dropped to 67 with greater degrees of depression (Fig 11). Operative treatment did not appreciably improve the result in those cases with more than 8 mm depression. However, operative treatment resulted in 56% with normal alignment, while nonoperative treatment produced only 28% with normal alignment (Fig 12). Open reduction also resulted in improved stability.

Total Depression: Operative treatment was clearly superior to nonoperative treatment by an average of 12 points, and angular deformities were much reduced (Figs 13, 14).

Split Fracture: Regardless of the method, the result of treatment was unsatisfactory, indicating the need for a better approach to management of this fracture (Fig 15).

Comminuted Fracture: Surgical treatment, although used sparingly in this fracture type, produced better results and also resulted in improved stability at follow-up. Limited open reduction was used to stabilize only a part of this complex fracture in most of the cases treated surgically. The complete open reduction, advocated by Rombold,[13] was used in some cases (Fig 16).

Other Findings: The patients treated with cast or traction had a mean result of 74, and were usually those with less severe fracture displacements. Those fractures requiring closed reduction techniques fared less well, with a 68 mean result, and the mean rating of all operated cases was 73.

The depth of depression bore a considerable relationship to the result. The fractures depressed less than 4 mm achieved a rating of 82, while those depressed over 14 mm rated 69 (Fig 17).

The depth of depression remaining after treatment bore a considerable relation to

angular deformity found at follow-up (Fig 18). Widening of the condyles remaining after definitive treatment was most significant in the result. When the widening was less than 4 mm, the result was 76; with widening of 6-9 mm the rating was 66, and with $>$ 12 mm, 50.

Normal or near normal stability of the knee was noted in 70% of patients with $<$ 7 mm depression, and in 54% of those with $>$ 7% depression. The stability one year after fracture was similar to that noted at follow-up. Angular deformity produced inferior results as compared with results in patients having normal knee alignment (Fig 19). The incidence of degenerative change increased with angular deformity (Fig 20).

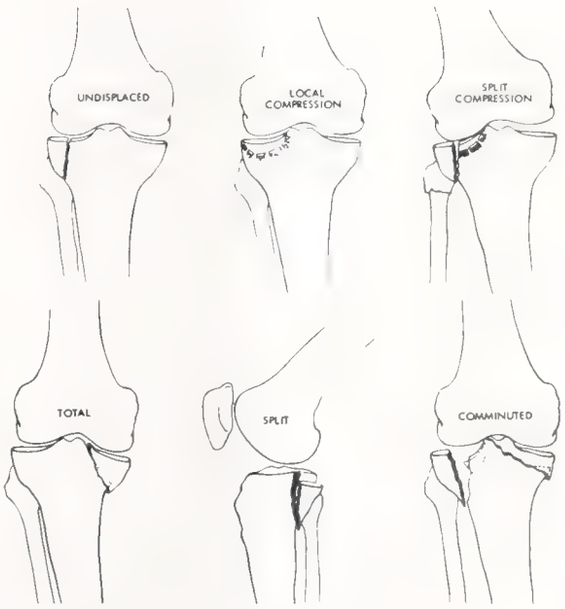
When the knee was kept extended in traction or cast during the treatment period the mean result was 76. Those cases held in a flexion angle of 15° had a 72 result, and an angle of 30° produced a 67 result.

The earlier that motion of the knee was started, the better the ultimate result. When motion was begun within two weeks the result averaged 80, but gradually deteriorated to 66 with 90-day immobilization.

The overall incidence of degenerative change in the knee was 63%. Patients with mild varus or valgus deformities had a 69% incidence of degenerative change, and those with severe varus or valgus deformities were 100% involved. Most degenerative change was noted to occur following the first year after fracture.

Discussion

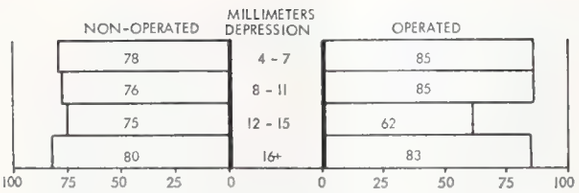
Analysis of the 300 tibial condylar fractures emphasizes the sequelae to be expected two or more years after injury. Although the results were largely acceptable



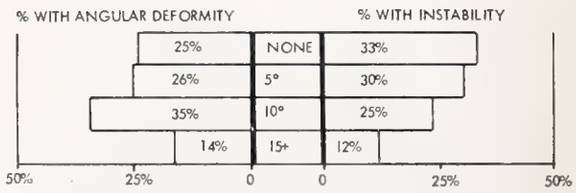
6. Types of tibial condylar fractures.

7. Average point result rating in types of tibial condylar fractures.

TYPE	NUMBER OF PATIENTS	AVERAGE RATING	RANGE
UNDISPLACED	50	82	41 - 100
LOCAL COMPRESSION	105	77	23 - 100
TOTAL DEPRESSION	25	76	35 - 97
SPLIT COMPRESSION	56	74	14 - 100
COMMINUTED	54	70	25 - 100
SPLIT	10	63	26 - 100
TOTAL	300	75	14 - 100



8. Point rating comparison of 105 local compression fractures with various amounts of depression treated by closed or open methods.



9. Amount of angular deformity and instability noted at follow-up in 105 local compression fractures.

10. Roentgenograms, 44-year-old woman with local compression fracture of the lateral tibial condyle. a. Original roentgenogram showing degree of articular depression. b. Postoperative

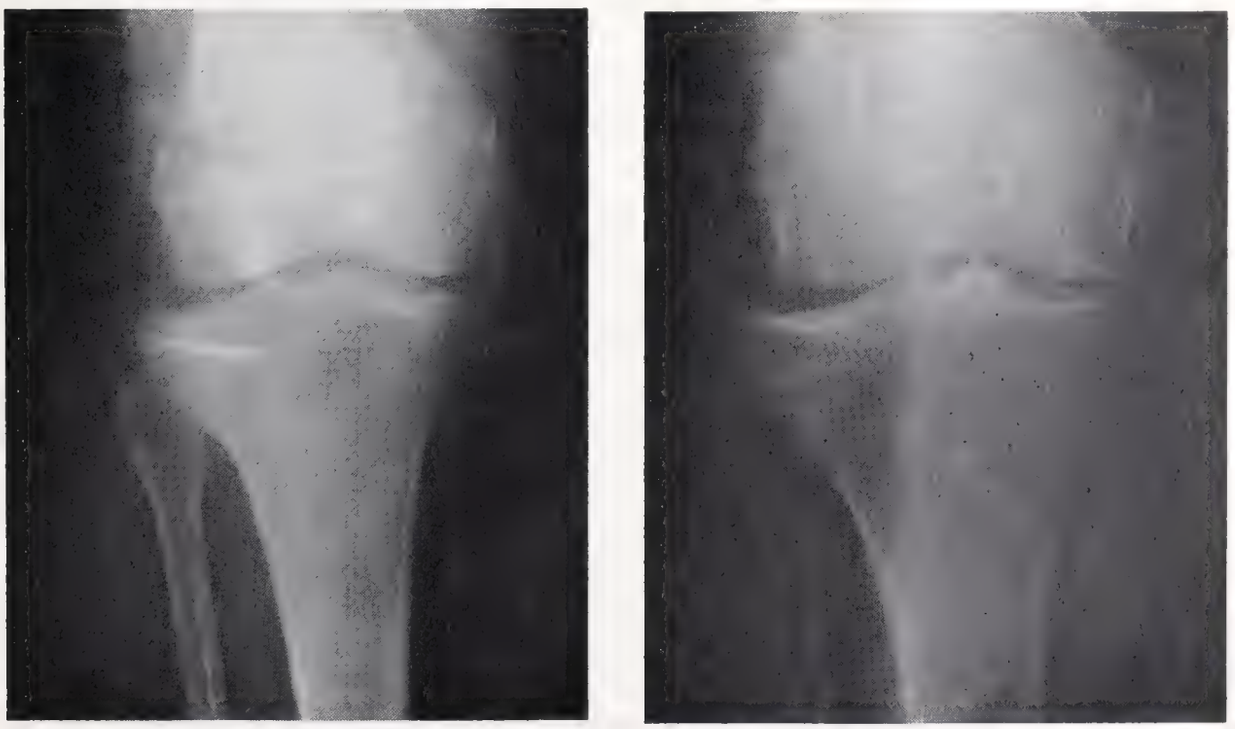
as determined by the grading method employed, the statistical result analysis pointed out many problems which led to inferior results, and to which attention should be directed to improve future results. These were lack of extension, limited motion, angular deformity, and instability.

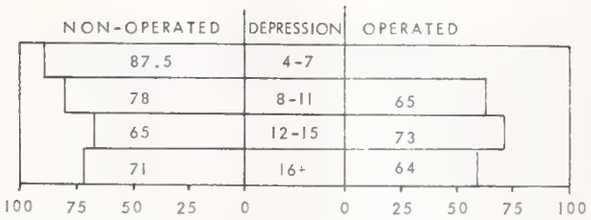
Early mobility of the knee, advocated by many authors in the past 20 years, has proven to be superior to prolonged immobilization, and this was confirmed by this study. In the cases mobilized early, fewer patients failed to achieve full extension, and they had a better point rating result. A frequent contributing factor to lack of extension was the practice of applying cast or traction to the injured knee in some knee flexion. This was shown to contribute significantly to limitation of extension at follow-up. In most uncomplicated cases, traction or immobilization should be used in full extension. Early active and passive exercises help significantly in the prevention of intra-articular adhesions.

Angular deformity, noted in 60% of patients, is acceptable when minimal, but when it is 10° or more it poses functional and cosmetic consequences as well as an increased threat of degenerative change. Effort should be made to prevent angular deformity by recognizing and treating appropriately those fracture types and displacements that so frequently and predictably result in deformity.[6] The same conclusion is reached for instability which occurs predictably after local compression fractures. Ligament injuries can be diagnosed and should be recognized and repaired early.

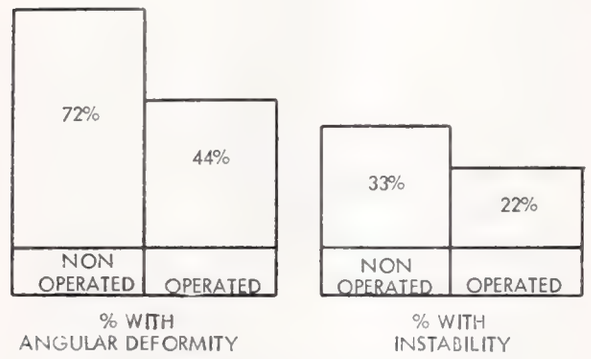
More study needs to be devoted to treat-

roentgenogram showing bone graft maintaining elevation of depressed fragments. c. Five years following injury. Note maintenance of cartilage space, minimal degenerative changes. Excellent function of the knee was present without angular deformity or significant instability.

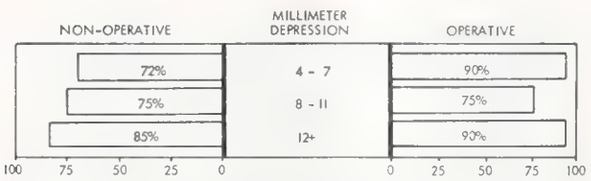




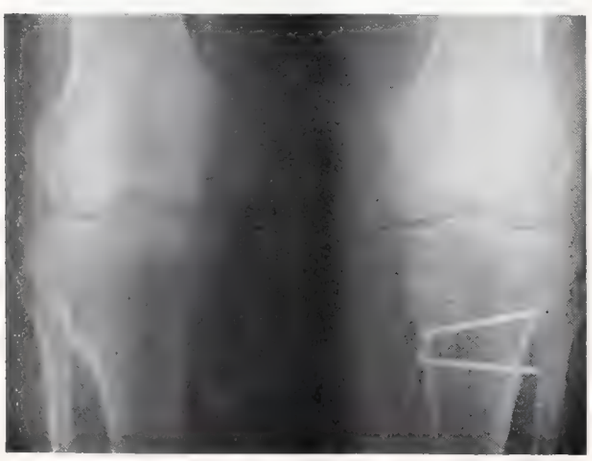
11. Point rating comparison of 56 split-compression fractures with various amounts of depression treated by closed or open methods.



12. Angular deformity and instability after split-compression fracture treated by closed or open methods.



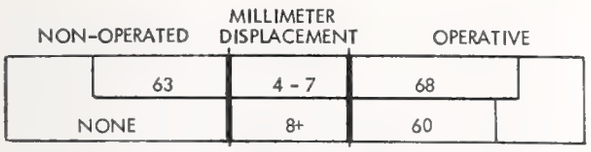
13. Point rating comparison of 25 total depression fractures with various amounts of depression treated by closed or open methods.



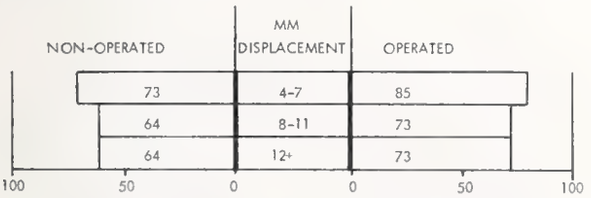
ment of the split fracture, which has shown consistently inferior results. The comminuted fracture also deserves more attention to delineate those cases that potentially might be benefited by closed manipulation or open reduction techniques. The total condylar fracture had the best results with open reduction. It would appear, therefore, that closed techniques should be used sparingly and with careful observation to avoid loss of fracture position and permanent deformity. Widening of the condyles has been shown to be as much of a problem as articular depression.

Techniques of restoring the articular surface after local compression fracture, together with the postoperative care in these cases, must be restudied and refined to produce more predictable results in depressions $>$ 8 mm.

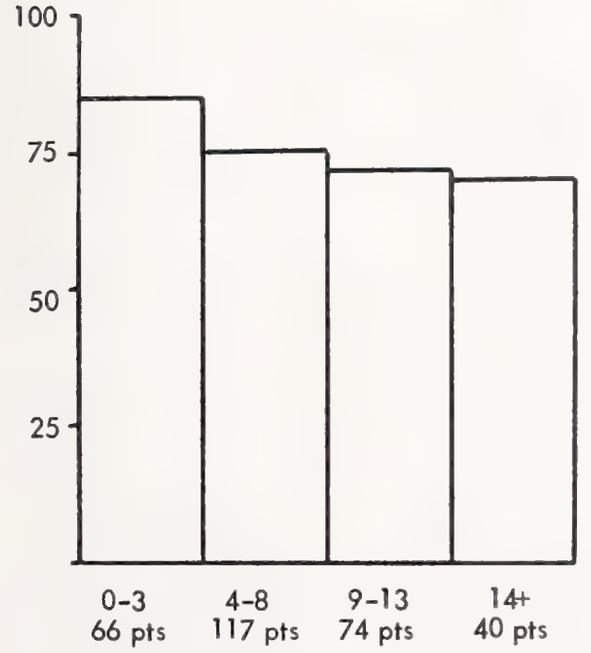
14. Roentgenograms of both knees of a 50-year-old man three months following severe automobile accident. The right knee fracture was of the comminuted type and was treated in traction. The left knee fracture was a displaced total condyle fracture treated by open reduction, internal fixation, and immediate mobilization. a. Roentgenograms three months after injury show the fracture position. b. Roentgenograms seven years after injury. Patient has maintained more than 90° motion in both knees with good stability and function.



15. Point rating comparison in ten split fractures treated by closed or open methods.



16. Point rating comparisons in 50 comminuted fractures of various degrees of displacement treated by closed or open methods.



17. Point rating results related to depth of depression in 300 tibial condylar fractures.

18. Relationship of amount of depression in post-reduction x-rays to angular deformity at follow-up.

DEPTH OF DEPRESSION (AFTER REDUCTION)	PERCENT WITH FIVE DEGREES OR LESS ANGULAR DEFORMITY
0 - 3	78%
6 - 9	58%
12 - 15	45%
16+	44%

ANGULAR KNEE DEFORMITY	INCIDENCE OF DEGENERATIVE CHANGE
NO DEFORMITY	46%
5°	67%
10°	77%
15°+	84%

19. Relationship of residual angular knee deformity to the incidence of degenerative change.

ANGULATION IN POST REDUCTION X-RAYS	RESULT
NORMAL	76
MINOR VALGUS	71
SEVERE VALGUS	65
MINOR VARUS	69
SEVERE VARUS	40

20. Relationship of angular deformity as noted in post-reduction x-rays to the point result.

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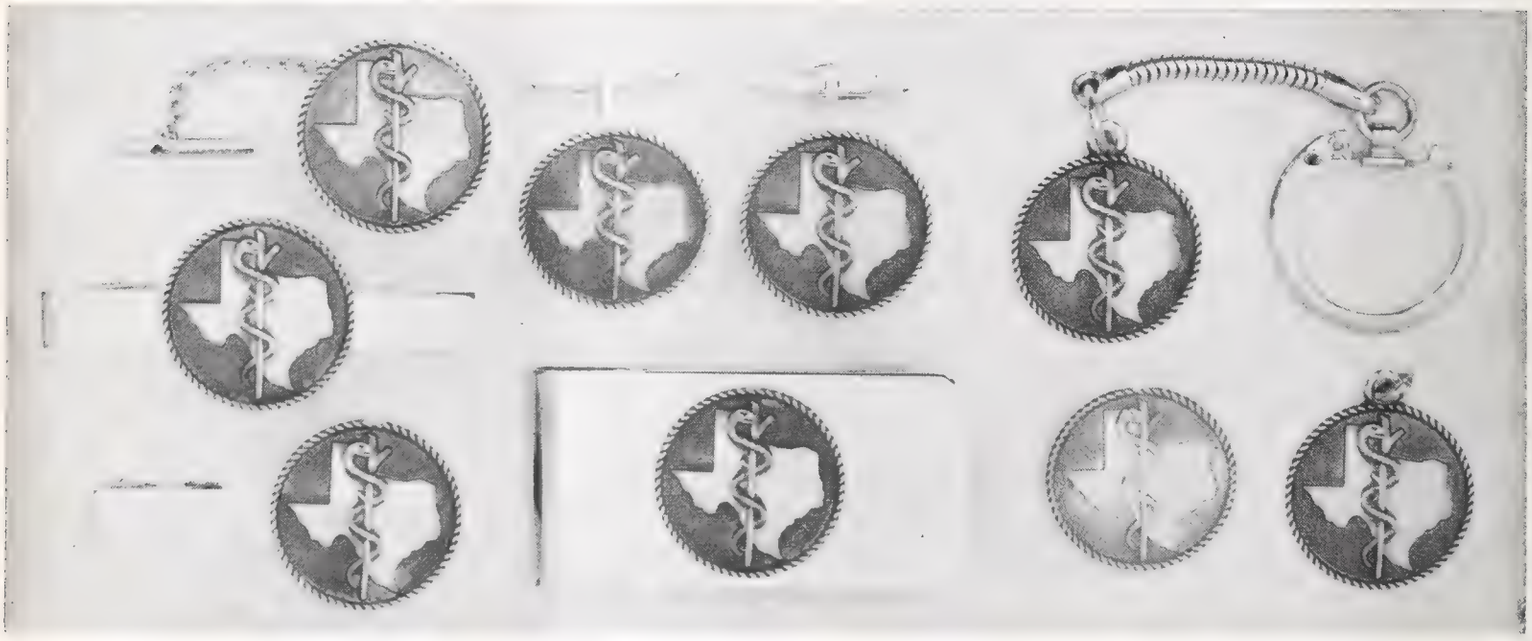

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Breast self-examination:

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item:	**Breast cancer is a major concern of American women, according to a recent Gallup study conducted for the American Cancer Society.**
item:	**Although aware that early discovery improves the chances of cure, and that BSE can lead to early discovery, *fewer than 1 in 5* women practice BSE, and *only half* have an annual breast examination by a physician.**
item:	**Only 35% of all women polled reported that a *physician* had ever raised the subject of breast self-examination, and only 24% had received instruction from the physician on how to do it. Even among women who regularly see a gynecologist, only 34% had been instructed on BSE.**
item:	***But,* among women who received personal instruction from their physicians, the overwhelming majority *(92%)* practiced BSE during the preceding year.**

The Gallup study revealed that, far more important than increasing awareness of breast self-examination, is the problem of inducing women to practice it regularly. The physician plays a key role in this—by teaching women the correct technique, and instilling in them the confidence that will assure their continued practice of BSE.

The American Cancer Society gives major emphasis to breast cancer through research and a vast array of public educational materials, designed to give women life-saving information about the disease. Our latest approach is via a pioneering television film starring Jennifer O'Neill, "Breast Cancer: Where We Are." Where we *will* be in a few years will certainly hinge on our joint efforts.

American Cancer Society®

Treating lumbar disc lesion by prolonged continuous reduction of intradiscal pressure

Gerald G. Hirschberg, MD

Herniation of a nucleus pulposus causing nerve compression can heal spontaneously provided low intradiscal pressure can be maintained for three months.

A regimen of complete continuous bed rest, and an ambulatory regimen which includes the use of a canvas corset or plastic body jacket and specific exercises, are described.

The use of the ambulatory regimen, alone or in combination with the bed regimen, has produced complete disappearance of symptoms in more than 90% of patients.

Introduction

It is commonly accepted that in the treatment of patients suffering from symptoms of herniated nucleus pulposus (lumbar disc lesion), conservative management should be tried before resorting to surgical procedure.[1,3] The danger of surgical complications, the certainty that laminectomy will cause damage to the stability of the spine, and the occasional failure of surgical procedures to relieve symptoms indicate the advisability of an initial trial of conservative treatment. In Great Britain, follow-up studies of patients whose lumbar disc lesions were managed conservatively have shown favorable results.[10]

While the value of conservative management appears to be accepted, the methods used in what commonly is called the "conservative trial" frequently are inadequate. Thus, a much larger number of patients fail to improve during the conservative trial and need surgical treatment than would be the case if more adequate conservative management were carried out. The difference in result between the usual conservative trial and adequate conservative treatment can best be shown by describing two cases.

Case Reports

Case 1: On Jan 11, 1971, a 44-year-old attorney injured his back while attempting to right a capsized sailboat. He suffered low back pain immediately, and the following day his back became stiff. A physician saw him, and ordered bed rest and prescribed Empirin with codeine. The patient followed this regimen, interrupted only by periods of swimming. Two weeks after the injury occurred, while the patient was swimming, he felt intense low back pain which radiated into his right leg.

"Conservative trial": On Jan 25, the patient was hospitalized. A myelogram showed a large defect at the L4-5 level, which indented the anterior and both lateral aspects of the Pantopaque column at the disc space. A period of "conservative trial" was begun, consisting of bed rest and pelvic traction for one week, after which the patient was discharged. Although he was subsequently treated by physical therapy, he continued to suffer low back pain in the left leg.

Strict conservative regimen: On March 22, the patient was again hospitalized. Our examination revealed a noticeable list to the left as the patient stood, restriction of forward bending and lateral bending to the right, a positive straight leg raising sign on the left, and a positive Lasègue's sign on the left. Results of neurologic examination of the legs were normal.

A strict conservative regimen was initiated. The patient remained at *continuous* bed rest for 13 days, although he was free of pain after one week. This period of continuous bed rest was followed by a strict ambulatory regimen upon discharge, which included the wearing of a plastic body flexion jacket *continuously* whenever he was not lying in a horizontal position in bed. The jacket was worn for three months.

A follow-up examination of this patient in 1974 showed that he had remained free of symptoms and had been able to carry out his usual physical activities.

Case 2: A 69-year-old housewife was knocked against a rock by a wave in February 1968. She had severe pain in the low back and left buttock and was hospitalized for two weeks. She was kept in traction and became symptom-free. However, in December 1969 she woke up with pain in the left hip and low back which radiated down the left leg.

"Conservative trial": The patient was hospitalized again. A lumbar myelogram showed a slight extradural impression on the left side of the opaque column at the level of the lumbosacral disc space. "Conservative trial" was begun, consisting of bed rest and pelvic traction for 16 days, but the patient was not relieved of pain.

Strict conservative regimen: Our examination of this patient in January 1970 revealed a positive straight leg raising sign on the left but no evidence of neurologic involvement. She was hospitalized at that time and was kept at *continuous* bed rest for three weeks, although she became free of pain after two weeks. She was discharged from the hospital and followed a strict ambulatory regimen, which included wearing a Hoke corset *continuously* for three months whenever she was not lying in a horizontal position in bed.

A follow-up examination of the patient in 1974 revealed that she had not had a recurrence of low back pain or sciatic pain.

Since 1960 we have treated several hundred patients with sciatica resulting from lumbar disc lesions. Most of them recovered with ambulatory treatment. Eighty-five patients were treated with complete continuous bed rest. Of these, only three patients were not relieved of pain during bed rest and required surgery.

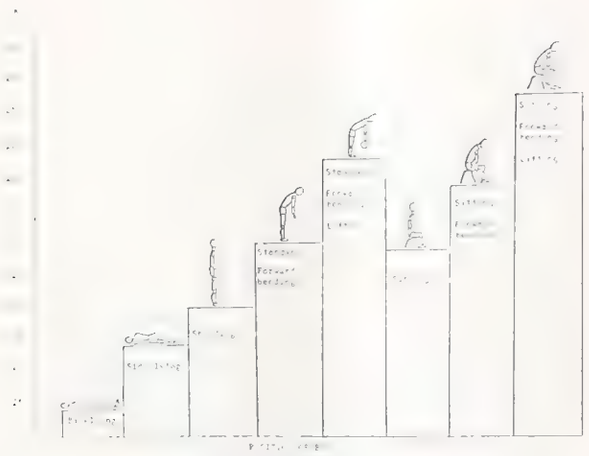
Rationale

In lumbar disc lesion, pain, paralysis, and sensory loss result from the compression of a nerve root by herniated disc material. Under favorable circumstances the protruded portion of the nucleus pulposus shrinks by dehydration, and the symptoms of nerve root compression are relieved. Over a period of months the posterior wall of the annulus fibrosus heals by fibrosis,[1] which may result in complete clinical recovery. However, if excessive pressure on the disc occurs before healing of the annulus fibrosus has progressed sufficiently, the tear will recur, additional disc material will be expelled, and symptoms will return or become aggravated. The purpose of our program of conservative management is to keep the intra-discal pressure low enough for a period long enough to permit adequate healing of the annulus fibrosus. In our clinical experience, it takes approximately three months until a patient can carry out the ordinary activities of daily living without danger of recurrence.

Results of recent studies in which intradiscal pressure has been measured in vivo[8] have shown that intradiscal pressure is lowest when the subject lies supine with his hips flexed. Pressure increases when the subject lies on his side, stands, sits, bends forward, or lifts an object (Fig 1). Pressure is also increased when the subject strains, coughs, or laughs.[9]

On the other hand, strong compression on the abdomen by means of a tight corset decreases the load on the lumbar discs,[2,7] and lowers the intradiscal pressure at the L-3 level up to 50% when the subject stands or sits.[8] These studies of intradiscal pressure explain the empirical fact that bed rest and a tight corset relieve the pain of lumbar disc lesion.

The major difference between the treat-



1. Total load on the third lumbar disc in different positions. The minimum load is found in the supine horizontal position and the increase in load with standing in forward flexion and sitting in forward flexion.

2. Method for placing patient on sunken bedpan. (From Arch Phys Med Rehab 53:192-193, 1972.)

ment we describe for maintaining low intradiscal pressure and traditional treatment by means of rest and corset is the continuous use of these measures for three months, for which specific procedures are required.

Indications for Complete, Continuous Bed Rest Followed by Ambulatory Treatment, Ambulatory Treatment Alone, or Surgical Treatment: For each patient treated by complete, continuous bed rest followed by specific ambulatory treatment, at least ten patients are treated successfully by the ambulatory method alone. Obviously, most patients prefer this latter method. Complete, continuous bed rest is recommended for (1) patients who have not obtained relief by means of the ambulatory method alone, (2) patients with paralysis of one or more leg muscles, (3) patients who require narcotics for relief of excruciating pain, and (4) patients who have been in severe pain for several weeks or months.

Conservative Treatment Versus Surgical Treatment: As mentioned previously, risks inherent in surgical treatment make an initial trial of conservative treatment advantageous. When the patient comes for help he is told that he has the choice of a surgical operation or the conservative program, which requires considerable participation on his part, reasonable intelligence, and the willingness and ability to pay attention to detail and to follow directions compulsively. He is given a written description of the program to read. If he decides that it is too difficult for him or that he prefers surgical treatment, he is referred to a surgeon. Most of our private patients have been treated previously for the disorder by other physicians, have not improved after one or more conservative trials, and have been advised to have surgical treatment. For these patients, who are looking desperately for a way to avoid the surgical operation, the strict regimen described in this paper is most certainly indicated.

Managing Complete Continuous Bed Rest

When the patient is in a horizontal position, the weight of the body does not affect the

disc. Nevertheless, intradiscal pressure can be increased by pain and muscle spasm, voluntary activities, and involuntary muscular contractions. Therefore, these three factors must be controlled.

Control of Pain and Muscle Spasm: Relief of pain and control of muscle spasm is attempted by means of medication and positioning of the patient in bed. Relief of pain is defined here as complete disappearance of severe root pain, enabling the patient to be comfortable and relaxed. Paresthesias, fleeting pains, and minor aches and pains in the low back area may be disregarded.

Patients can be divided into three groups according to their response. Group 1: Relief of pain is achieved by positioning in bed alone. Group 2: Relief of pain is achieved after three or four days of bed rest along with the administration of narcotics. Group 3: Relief of pain is not achieved in three or four days.

Group 1. Methods of Positioning: The most beneficial position for maximum decrease of intradiscal pressure and for relief of pain is the so-called semi-Fowler position in which the patient lies on his back with his head and knees slightly elevated.

The bed should be equipped with a10 cm (about a 4-inch) foam rubber mattress over a slatted or folding bed board, which permits the mattress to adapt to the contour of the bed frame. The overhead trapeze should be removed so that the patient will not be tempted to pull himself up. A cradle should be placed over the knees in order to allow free movement of the legs, and a foot board should be positioned at the end of the mattress. It may be advisable to place lamb's wool or a foam rubber pad under the sacral area to minimize discomfort. A hospital bed with an electrical control for adjustment of position is preferable. Initially the head of the bed is raised 30 cm (about 12 inches) above the level of the hips. Under no circumstances should the head portion of the bed be raised above 30 cm. The portion under the knees, usually marked "feet" or "seat" on the electric adjustment is raised to the maximum. From this position the bed can be lowered at the head or foot in order to achieve maximum comfort.

During the first week the adjustment of the bed should not be changed. The patient should remain in this semi-Fowler position day and night for the first two to three days of the bed phase. He may be moved passively into side-lying position for brief periods only for examination or use of the bed pan.

After three days the side-lying position may be assumed for longer periods alternately with the supine semi-Fowler position. Elevation of the bed keeps the hips and knees flexed when the patient is in the side-lying position. However, the patient still should be moved passively to this position.

After one week the bed may be altered to a completely flat position if desired, and the patient may roll actively to his side, using his arms as he grasps the side rail and pulls himself over on his side. Under no circumstances should the patient assume a prone position during the bed phase.

Supportive Medication: To maintain proper positioning, group 1 patients may require two kinds of medication: (1) minor analgesics such as aspirin, Empirin, and Bufferin to relieve aches and pains resulting from lying in one position, and (2) tranquilizers to facilitate the tolerance of enforced immobility. According to the patient's temperament and wishes, one may choose between a sleep-inducing tranquilizer such as Valium or meprobamate, and one that is not sleep inducing such as Compazine or Stelazine.

Group 2: If poisitioning alone does not relieve the pain, it is important to use medication that will keep the patient completely free of pain so that he can relax in semi-Fowler position and avoid turning and twisting because of discomfort. Analgesics usually are inadequate to accomplish this goal during the initial stages, thus narcotics must be used. The choice of narcotic is determined by the patient's tolerance of the drug and by the drug's effectiveness. Frequently, 0.5-1.0 grain of codeine in the form of Empirin with codeine administered orally is adequate for relief of pain. Sometimes Demerol or morphine is needed. It

is best to give the medication every three or four hours around the clock during the first three days. When medication is administered on demand, patients frequently wait until their pain is severe before they request it. Then it may take a half-hour to an hour before it is actually administered and again another half-hour until relief of pain actually begins. Thus, the patient may remain in pain for as long as two hours.

If the patient is not completely free of pain and relaxed with around-the-clock administration of narcotics, a muscle relaxant such as meprobamate must be added. The dose should be adequate to relax the patient even though the medication may keep him asleep most of the time.

After three days, the narcotic is given only when requested by the patient. The patient must be instructed to request medication immediately at the onset of pain, and the nurses must be instructed to give it promptly upon the patient's request. Rarely is a patient completely free of pain after the first three days of administration of narcotics, but usually at that time he will require medication less often than every three or four hours, and in subsequent days his need for medication will diminish. Some patients may at this stage still require medication after they have used the bedpan. Others may wake up in the middle of the night complaining of sciatic pain. In such cases, if the patient's narcotic requirement has decreased to one or two doses a day, he may be given the choice of Empirin and codeine or Bufferin as needed. At the end of one week most patients are free of pain. The positioning program may then be the same as for patients in group 1, but complete bed rest must continue for another two weeks.

Group 3: If after three days the patient's demand for narcotics continues every three or four hours, one should first ascertain that he has actually followed the complete bed rest program diligently. If that is the case, use of anti-inflammatory medication such as prednisone is advisable, provided that there are no serious contraindications to its use. Fifteen to 20 mg of prednisone a day for a week or two usually are given to reduce the inflammatory swelling of the nerve root and thereby accelerate relief of pain. If the drug is effective, relief of pain generally starts within a few days. After relief of pain is complete, the patient should be kept at complete bed rest for another week. This may necessitate prolonging the bed rest phase up to three weeks, and, in our experience, has been the maximum time required in the treatment of sciatica. If relief of pain is not obtained in three weeks, a surgical operation may be indicated.

A word must be said about two commonly used physical methods for the relief of pain and muscle spasm in lumbar disc lesion, namely, hot packs and traction. Pelvic traction of 10 kg (about 20 lb) is widely used. While it does not exert traction on the lumbar spine,[6] it helps keep the patient quiet in a semi-Fowler position. Unfortunately, the traction apparatus has to be removed during the patient's use of the bedpan and frequently during his bath. The patient may even remove it himself and put it on again. This additional motion, in our opinion, negates the usefulness of the traction.

A similar argument may be made against hot packs, which are excellent means of providing relief of pain and relaxation of muscle spasm if they are applied expertly. In practice, however, we have found that movement of the patient during application and removal of hot packs frequently has aggravated pain, proving the procedure to be more harmful than helpful. If one chooses to employ hot packs or traction, one should make certain that the patient is moved as little as possible and as carefully as possible.

Control of Voluntary Activity: The restrictions of voluntary activity are defined in the term "complete continuous bed rest."

In order to prevent any increase of in-

tradiscal pressure, bed rest must be *continuous*. A single brief instance of sitting up or getting out of bed may produce protrusion of disc material and instigate a new attack. It is difficult to convince patients, nurses, and physicians of this fact. The patient must not be raised for meals beyond the 30 cm limit despite the difficulty of his eating in a horizontal position.

He cannot have bathroom privileges, even though it may be true that placing the patient on a bedpan may at times prove to be more damaging than allowing him the use of a bedside commode.[3] There are methods of placing the patient on a bedpan that are safe (Fig 2); however, to carry out toileting and all activities of daily living in bed requires skilled nursing. One may have to use all one's ingenuity to keep the patient continuously horizontal for the required time during his hospitalization.

If a patient has to be transferred from his bed for diagnostic purposes, he must remain in a horizontal position. Any procedures requiring that he sit or stand must be postponed until he is ready for the ambulatory phase.

Complete bed rest is defined as bed rest with assistance in eating, changing body position, using the bedpan and other activities.[4]

Activities To Be Avoided: The patient should be told not to raise his head, to turn, to reach for any distant object, or to lift himself by pulling on any part of the bed. All necessary equipment should be within easy reach, including the call light, television switch, and telephone. He should be instructed to call the nurse for any items not within easy reach. For reading he should have a reading rack and prism glasses which enable him to read in supine position without moving his head.

Eating: Most patients are able to eat without assistance in the semi-Fowler position provided their food is cut up and positioned conveniently. Fluids can be taken through straws. If patients have great difficulty feeding themselves in supine position and are free of pain, they may be allowed to feed themselves in side-lying position. However, patients with severe sciatic syndrome whose pain is aggravated by the slightest body motion must be fed until they become free of pain.

Bathing: Patients may be allowed to wash hands and face. For patients with severe pain this is the only washing allowed during the first few days. After the patient is free of pain a bed bath may be given by the nurse. The patient must be passively rolled on his side and returned into supine position. Great care should be taken that the patient remain relaxed during the rolling and that he does not participate in the effort. At no time should he be asked to wash his own trunk or lower extremities during the bed rest phase.

Bowel Program: Evacuation of the bowels presents special problems in the conservative management of lumbar disc lesion, for moving the bowels places the patient in double jeopardy. The straining which is involved in evacuation of the bowel increases intradiscal pressure. The use of a bedside commode or of a regular bedpan also increases intradiscal pressure.

For more than ten years we have successfully used for our patients a sunken bedpan which enables them to defecate in supine position (Fig 2).[5] A hole of the exact size and contour of a regular bedpan is cut into a 10-cm foam rubber mattress at the appropriate place. The cut out portion of mattress is covered with mattress ticking and placed into the hole as a removable plug. To use the bedpan, the patient is rolled to one side of the bed, the plug is removed, the bedpan is put in the hole, and the patient is rolled on his back. This requires no activity on the part of the patient.

Although the described procedure considerably reduces the danger of damage to the disc during defecation, limitation of bowel evacuation is nevertheless advisable as is the administration of a stool softener to assure evacuation without strain. During the first few days while the patient still has sciatic pain, bowel evacuation is avoided entirely. If narcotics are used for relief of pain, their constipating action is helpful in this regard. Then the patient is given a stool softener such as Doxinate (240 mg) two to three times a day, and a bowel movement is induced every second or third day by

means of a Fleet enema. The patient must be encouraged not to strain during the bowel movement.

Bladder Program: The activity of daily living which can most frequently interfere with complete continuous bed rest is the emptying of the bladder. Male patients can void in a urinal without changing the semi-Fowler position. For women the sunken bedpan is used.

Frequently patients have difficulty voiding when they are in supine position. Measures to induce emptying of the bladder are: the sound of running water, hot packs to the suprapubic region, or medications such as Urecholine and Prostigmin. If the patient still cannot void, he should be catheterized. Frequently, patients become able to void in supine position after one catheterization. However, if this is not the case and the patient requires repeated catheterization, the use of an indwelling catheter is advisable. The decision to employ one should be made within the first 24 hours. In women with severe sciatica, an indwelling catheter may be used from the outset in order to avoid the bedpan procedure.

Recommended Activities: To avoid thrombotic phenomena as much as possible, the patient should be encouraged to carry out activities of the upper and lower extremities which do not require contraction of the trunk muscles.

The upper extremities usually are adequately exercised during the patient's daily activities: eating, washing the hands, reading, writing, and using the telephone. Crafts also may be considered. In all these activities the patient must be warned not to raise his head.

Activity of the lower extremities is even more important, not only for the prevention of disuse but for the prevention of thrombotic phenomena as well. The immobilized patient at bed rest is in danger from the possibility of pelvic thrombi and pulmonary emboli. The recommended leg exercise consists of simultaneous flexion of the hip and knee as the heel of the leg glides along the mattress. The hip and knee may be flexed until the foot rests on the crest of the raised portion of the bed. The patient should be encouraged to perform approximately five such motions with each leg every hour, alternating each leg or moving both legs simultaneously.

Other measures to prevent thrombosis may be taken: Women should discontinue taking birth control pills during this treatment; knee-length elastic stockings may be worn; heparin may be administered daily; or 2 to 3 gm of aspirin may be administered daily as a mild anticoagulant.

Suppression of Involuntary Muscular Contraction: Coughing, Sneezing, Vomiting, Laughing: If the patient is given morphine derivatives, cough will be controlled during the first two or three days. Later on, if the patient has a tendency to cough, he should be given medication every three to four hours around the clock. Empirin with codeine could be used for this purpose.

If the patient is known to be allergic and is likely to sneeze because of a cold, a systematic program of antihistaminic medication should be instituted.

To avoid drug-induced vomiting, it is important to inquire of the patient which narcotics he tolerates best. In case of nausea and vomiting, anti-emetic medication such as atropine or Compazine should be given promptly.

Patient and visitors must be cautioned to avoid hilarious, laughter-provoking conversations.

Transition to Ambulatory Treatment: As a general rule the patient should be free of pain for one week before the ambulatory phase of treatment is started.

The Hoke corset should be ordered ahead of time to be available when it is needed, and it should be checked for fit and adequacy. The patient is asked to take a sitting position on the edge of the bed. He may feel dizzy for a few minutes and his legs may tingle. If he remains free of pain,

the back of a chair or a walkerette is placed in front of him for support and he is asked to stand up and, after a while, to take a few steps. If he remains free of pain (and he usually does) the treatment may be considered successful. If pain recurs he is not ready for the ambulatory phase and further bed rest is necessary.

For the next two days he should take short walks around the room, supported by the walkerette at first, then without support. After he regains enough strength to walk securely he is ready to begin the ambulatory phase of treatment.

Management of Ambulatory Treatment

In the final phase of the conservative treatment of lumbar disc a strict ambulatory regimen is initiated. For three months the patient wears a corset or jacket *continuously* when he is not lying in a horizontal position in bed. Furthermore, during this time specific restrictions are placed on some of his usual activities, and these restrictions must be adhered to carefully.

The appliance the patient wears must effectively decrease intradiscal pressure by placing considerable pressure on the abdomen. It must also restrict the mobility of the trunk, particularly the action of forward flexion. Two appliances which satisfy these conditions are the Hoke corset and the Raney flexion jacket.[11]

The Hoke corset is a canvas cylinder which surrounds the trunk of the patient from the pubis to the sternum in front and from the sacrum to the middle of the shoulder blades in back. It is closed in front by straps and buckles and has paravertebral pockets in the back for the insertion of steel stays. The corset must be fitted and shaped to the figure of the patient. A marked narrowing in the waist of the corset is important in order to prevent it from sliding upward. When the corset is properly adjusted, considerable pressure is exerted on the abdomen.

The corset must be put on when the patient is in supine position. The lowest strap of the corset is located at the upper border of the pubic bone. The lower straps, which tighten the corset around the pelvis, should be snug. The middle straps at the waist are fastened as tightly as possible and should exert noticeable abdominal pressure. The uppermost strap, located at the lower portion of the sternum, can be loosened to allow epigastric expansion during breathing.

The Raney flexion jacket, like the Hoke corset, surrounds the trunk completely and reaches from the pubis to the sternum in front and from the sacrum to the middle of the shoulder blades in back. Light and comfortable because it is made of Royalite, the Raney jacket is divided into an anterior and posterior shell that are held together by leather straps in the axillary line. It is designed with a deep indentation located anteriorly between the pubis and the sternum. This anterior indentation serves the double purpose of keeping the lumbar spine in flexion and of exerting pressure on the abdomen. The indentation also prevents the corset from sliding upward or from rotating. It must be applied to the patient when he is in supine position. The anterior border of the jacket is located at the superior edge of the pubic bone.

Making a Raney flexion jacket presents one problem. Initially a plaster mold of the patient's trunk must be made, and for this procedure the patient must be in sitting position. Sitting upright may produce a recurrence of lumbar disc herniation even after a patient has been at bed rest for two weeks. To prevent this complication we first fit each patient with a Hoke corset while the patient is in supine position. Then, protected by the Hoke corset, the patient sits upright, and the plaster is applied over the corset.

Choosing Between Corset and Body Jacket: The Raney jacket, if properly tightened, stays in place. It probably provides greater and more constant abdominal pressure than the Hoke corset whose straps tend to loosen. The Raney jacket does not deteriorate, while the canvas corset tends to tear in time and straps must be replaced. As far as comfort is concerned, some patients prefer the jacket while others prefer the corset.

Restriction of Activity: While many patients accept the exacting continuous bed rest

phase as a necessary evil, usually they are greatly puzzled by the strict ambulatory regimen which follows the first phase. It is important to explain to the patient again and again the mechanism of the disc herniation, the effect of the load on the disc, and the role the corset or jacket he must wear plays in diminishing the load. All restrictions in activity must be outlined clearly to the patient. Usually the patient needs to be seen by the physician approximately four times during this three-month period: two weeks after the discharge from the hospital, and again at one-, two-, and three-month intervals. Usually some alteration in the design or application of the corset is necessary. Also, the patient needs psychological support to help him persevere in restricting his activities.

Bathing: Since the patient must not leave the horizontal position without wearing a corset or body jacket, he must alter his usual routine of cleanliness. It is simplest for him to eliminate bath and showers altogether and take sponge baths instead while he wears the corset. The area of the body that is usually corseted can be cleaned by means of a sponge bath in bed given by someone who is living with the patient or by a visiting nurse if the patient lives alone. If the patient insists upon taking showers he may: (1) cover his corset with a plastic sheet as he takes a shower to prevent it from getting wet, (2) use two corsets, one of which gets wet during the shower, or (3) if he uses a Raney flexion jacket, have a second unlined jacket which is used only for showers.

Whichever method the patient chooses, the area under the corset will still have to be cleaned by means of a sponge bath as he lies in horizontal position. If he showers in a corset or jacket, after the shower he must lie down to remove the wet one, dry his body, and put on another appliance. He will require some assistance in these activities.

Sexual Activity: Studies of intradiscal pressure during sexual intercourse are not available at present, but clinical experience has shown that if sexual activity is engaged in too soon, symptoms frequently recur. Therefore, we recommend the following routine: During the first two weeks of the ambulatory phase the patient should engage in no sexual activity whatsoever. During the following six weeks sexual relations may be engaged in only while wearing the corset or body jacket; the patient is in supine position with hips and knees flexed; trunk activity is restricted to a minimum. From the eighth to the twelfth week of the ambulatory phase the patient may have sexual relations without wearing the appliance, but the same rules for position and avoidance of violent motion should be observed.

Sitting and Lifting: The most common daily activities which increase intradiscal pressure, and therefore need to be regulated, are sitting and lifting.

During the first two to three weeks of the ambulatory phase, sitting should be limited to periods of 30 minutes. The use of an elevated chair 55-60 cm (about 22-24 inches) high prevents the lower edge of the corset or jacket from pressing on the thigh. Furthermore, getting up from and sitting down on an elevated seat requires less effort and less forward bending. On the toilet the patient should use a 15-cm (about 6-inch) raised toilet seat. Since driving a car necessitates sitting, driving time must be limited to short periods initially. The car seat should be raised as high as possible by a firm cushion. The back of the seat should be slightly reclined.

After the third week, periods of sitting can be increased gradually; after the eighth week of the ambulatory phase the patient may sit for several hours, but he still must use the elevated chair.

No object heavier than 5 kg (about 10 lb) should be lifted. Picking up an object from the floor should be accomplished by bending the knees and not by bending the back forward. Heavy pushing and pulling, such

as pushing a lawn mower or pulling weeds, also must be avoided.

For patients who need physical activity, walking is recommended. There is no medical indication for any exercise other than walking at this time and it is best to postpone any specific therapeutic exercise until *after* the third month.

Work: The restriction of activities of daily living gives an indication of those necessary in work. Many patients can resume work during the corset phase. The teacher who can prepare lesson plans in a horizontal position and teach in a standing position can go back to work shortly after the ambulatory phase begins. The same is true of salesmen, executives, and many other white collar workers. Patients whose occupations necessitate sitting for several hours, such as typists, can return to work after the first or second month of the ambulatory phase, provided they arrange to sit on an elevated chair. A housewife can do most of her chores, provided she avoids lifting and sitting.

Patient Management after the Third Month of the Ambulatory Phase

If three months have passed since the beginning of the ambulatory phase and the patient has had no recurrence of symptoms, conservative management can be considered successful. Nevertheless, the disc is not healed at that time, treatment is not complete, and further medical supervision is necessary. Gradual elimination of the corset and restoration of normal trunk mobility and strength are the goals of treatment.

Gradual Elimination of the Corset: After wearing the corset or jacket for three months the patient has become adjusted to it, feels quite comfortable in it, and frequently is reluctant to discard it.

Normally, in the event of increased load, the contraction of abdominal muscles protects the lumbar disc. Since the patient becomes conditioned gradually to contracting the abdominal muscles during effort, the corset has to be eliminated gradually. It is best to start this process of elimination under controlled conditions; that is, during times of complete leisure—after work, on weekends, or on days off.

Initially the corset will be worn approximately 75% of the day; then, after a week or two, 50%; and finally, 25%. The corset always should be worn during sitting, driving, strenuous activity, and sports activity. Six months after the ambulatory phase has begun, the corset, in most cases, may be discarded entirely.

Restoration of Trunk Mobility: When the patient is examined for the first time without his corset at the three-month check-up of the ambulatory phase of treatment, the physician usually finds a limitation of trunk flexion. We have chosen a simple exercise which the patient can perform under the shower. Standing with knees extended and legs slightly spread, the patient bends forward passively as far as the weight of his trunk will pull him, without any additional muscular effort and without any momentum. He stays completely relaxed in this position and allows very hot water from the shower to run over his lumbar, sacral, and gluteal regions. The patient then straightens up slowly and repeats this maneuver two more times. This exercise places a greater load on the disc than has been placed on it in the preceding months, and for this reason the exercise has to be done with great care. Usually the range of trunk flexion becomes normal after a month of these forward bending exercises. At this point the program of trunk strengthening is started.

Trunk Strengthening: The crucial function of exercise is to strengthen the abdominal muscles. However, always conscious of the fact that the injured disc has not completely healed and is still vulnerable to the strain of excessive loads, we have looked for such exercises that will place only a minimal load on that disc. We have found that exercises in which the patient is in suspended position are most suitable. If the patient is able to chin himself at a horizontal bar, this exercise will be the one of choice. The patient will begin by chinning himself as he flexes his trunk, hips, and knees. The

synergic action of flexors facilitates strengthening of the abdominal muscles. Later on, he progresses to flexing his trunk and hips with his knees extended, thus placing a greater load on the abdominal muscles. If the patient is unable to chin himself he may push himself up on a parallel bar and carry out the same program—at first flexing his trunk and hips with his knees extended, thus placing a greater load on the abdominal muscles.

Additional effective exercises for the trunk are swimming, jogging, and walking uphill. All these activities are permissible after the third or fourth month of the ambulatory phase.

By the sixth month the patient should have regained adequate trunk strength and mobility. At this point most patients can go without the corset and carry out all their regular daily activities. However, since the original disc lesion has indicated vulnerability of the intervertebral discs, patients are advised to use the corset for heavy duty. This term needs to be explained, since it may mean different things for different patients. The person who does not usually engage in heavy lifting should put his corset or jacket on before he moves furniture or undertakes a repair job in the house in which he must carry some medium loads. For the mechanic or any person who ordinarily lifts loads of up to 23 kg (about 50 lb) in his daily life, the corset will be needed only when he is confronted with a task in which he must carry an extra heavy load. It probably would be advisable for a person who has suffered a lumbar disc lesion not to lift anything heavier than 23 kg for the rest of his life. In the case of a laborer who is not young and whose livelihood depends on being able to lift heavy loads, one would question whether or not he should ever be allowed to return to the same work. In a younger person engaged in similar work, the occurrence of a lumbar disc lesion should not condemn him to retirement, but this person should return to work wearing a corset or body jacket. Unfortunately, it is most unlikely that an employer would be willing to rehire a worker who, by order of his physician, must wear a corset. Laborers older than 40 or 50 years should consider either retirement or, if feasible, vocational rehabilitation.

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Night terrors in children: Causes and treatment

Erwin L. Taboada, MD

Fear of death is the causative factor in many cases of night terrors in children. Physicians may deal with this condition successfully by encouraging the child to express his fears and by being supportive. The clinical and physiological aspects of the condition are viewed and a case is presented.

Introduction

Sleep disorders occur frequently among children and adults and may be considered important medical and social problems.[13]

Polygraphic techniques have taught us much about the physiological and psychological correlates of sleep and dreams,[6-9] but with the exception of a few disorders, little is known about their etiology.[14]

Nelson has given us a good description of night terrors and has pointed out that at times the distinction between night terrors and nightmares may be arbitrary.[16] The most essential difference is that in nightmares the child can be awakened and, often, he remembers a terrifying dream; in cases of night terrors, dream recall is fragmentary or absent.

Few presentations and reports on treatment of this condition are available. Analysts have assumed that deep-seated conflicts are the causative agent(s).[2,3,12,15,21]

Extensive observations of children affected by night terrors (pavor nocturnus) were made and reported by Rhazes (910 AD). While describing the first recognizable epidemics of smallpox among children, he listed the following symptoms at the onset of the illness: "continuous fever, itching in the nose, back pain, and *night terrors.*" Clearly, those night terrors were caused by fear of a disease known to have a high mortality rate.

Contemporary studies of reaction to civilian catastrophes tend to support fear as a causative factor. Some victims of these catastrophes have a post-traumatic syndrome lasting for days, weeks, or months. The syndrome includes anxiety, chronic muscular tension, tremor, insomnia, and *repetitive nightmares* reproducing the traumatic incident directly or symbolically.[25]

Night terrors have affected family members for as long as 43 years.[5] They have been associated at times with somnambulism and enuresis, or different combinations of these, in family histories.[13]

Clinical and polygraphic studies of epileptic children with night terrors showed no relationship between these conditions.[4]

Polygraphic studies tend to support the idea that some "sleep disorders" are really disorders of the arousal mechanism.[2,6,13] Somnambulism, sleep talking, sleepwalking, night terrors, and many incidents of enuresis take place during arousal from slow-wave sleep (nonrapid eye movement stages 3 and 4). They are associated with body movements, autonomic activation, mental confusion, relative nonreactivity to external stimuli, poor response to efforts to provoke behavioral wakefulness, retrograde amnesia for many intercurrent events, and only fragmentary or no recall of apparent dreams.[6]

It is possible that dream recall, present in nightmares and not in night terrors, is the result of mentations carried over to a subsequent arousal period from rapid eye movement. If arousal (wakefulness) lasts 18 minutes or more, memory traces can consolidate. With less wakefulness there is increasing reduction in recall of dream or words presented to subjects.[28] The suggestion is that when subjects do not wake up close enough to the dream period, dreams will not be recalled. Disorders of arousal mechanism may prevent individuals from recalling these dreams during stages 3-4 of nonrapid eye movement, because memories of these dreams do not consolidate.[28]

Responses to fear thus may include nightmares in some individuals and night terrors in others whose arousal mechanism is affected. Intensity of the fear, age, and

imagery may be other variables. I have found no evidence that "deep seated" (in other words, sexual) conflicts and repression (of dreams) play any role in night terrors. Different treatments for patients affected by night terrors have been reported; psychoanalysis is one and diazepam (Valium is another.[2-27]

Diazepam can suppress night terrors after one or two weeks of treatment. When it is discontinued, night terrors may recur.[27] Flurazepam hydrochloride (Dalmane) also has been used to treat this disorder.[14]

I tried therapy based on exploring the traumatic experience, allowing the child to express and understand his emotions, along with encouraging the use of imagery. Imagery as a tool for modifying behavior has been used in well documented studies.[29] Although the patient's response in my case may have been influenced by light hypnosis, I believe that this is not essential.

Other "sleep disorders" of children that have been treated with hypnosis include fear of darkness and postsurgical fear of going to sleep.[7]

Case Report

A 7-year-old boy was brought to my office during the summer of 1973. He was healthy and bright. After enjoying two weeks of activities at day camp, he began having episodes of night terrors which occurred for 15 consecutive nights. One to one and one-half hours after the onset of sleep he would start screaming loudly, toss and turn, or sit up. He perspired profusely. When his parent(s) tried to calm him, the child would mumble unintelligible words or make gestures. After two to ten minutes, he would be soundly asleep. The episodes did not recur the same night, and the patient had no recollection of the event the following morning.

The patient had a close relationship with both parents. He was a good student, with a greater than average sense of responsibility. Although he took care of his younger brother at times, he openly verbalized his preference for playing or staying with his own friends. He was mildly anxious throughout the treatment period. During the interview with his mother, I learned that at the end of the camping period, a boat which the patient and other boys and instructors were using had capsized. He remembered the screaming of all the children before their rescue. The patient told me essentially the same story. Inducing a light hypnotic trance in the patient, I asked him to imagine himself slightly older, a good swimmer (he was attending beginning swimming lessons at the time), playing with a boat in a lake, going after the big waves, helping in turning the boat upside down . . . his face reflected amusement and enjoyment. I "woke" him up.

Three days later his mother called to say that since the day of the interview, he had not had any other episode of night terrors. Now, 18 months later, he remains free of them.

It was interesting to learn that about 6 weeks after the treatment, the boy told his mother that the actual capsizing never occurred. What did happen was that he had been scared of the "big waves" and had imagined the rest—capsizing, children screaming, and rescue.

Comment

Night terrors occur almost invariably during stage 4 nonrapid eye movement sleep and, in many cases, may be caused by fear of death. Often they are quite distinct from the more frequent nightmare, the rapid eye movement anxiety dream.

Review of ancient and contemporary literature from clinicians and research institutes allows us to question some frequently repeated statements. Some of

these seemingly erroneous beliefs are:

1. "Night terrors reflect central nervous system immaturity."[9]

Most of the reports describe these children as being unusually intelligent, sensitive, imaginative, and articulate. Their parents have similar characteristics.[21]

2. "Night terrors occur at night only."

They also have been observed in children during naps.[9]

3. "The content of dream . . . in night terrors is overwhelming."

Because night terrors occur in stage 3-4 nonrapid eye movement, and persons (children, adolescents, adults) do not fully wake up, there is no recollection of dreams available for study.

4. "Night terrors reflect deep seated problems." "Dream activity is repressed."

I have found no support for these statements in case presentations by clinicians who have actually observed and treated cases.

5. "Hysteria, epilepsy, night terrors, and other nervous or mental disorders may be related."[6]

These types of assumptions have not been supported by evidence.

6. "Children will outgrow night terrors."[9]

Some cases have lasted up to 43 years![5]

In the treatment of this condition, supportive therapy conducted by the family physician or pediatrician may be all that is needed. Emphasis is placed on allowing the child to express his fear. We (with him) attempt to understand his problem as much as possible and to reassure him.

Use of eidetic imagery can provide additional benefit.[29]

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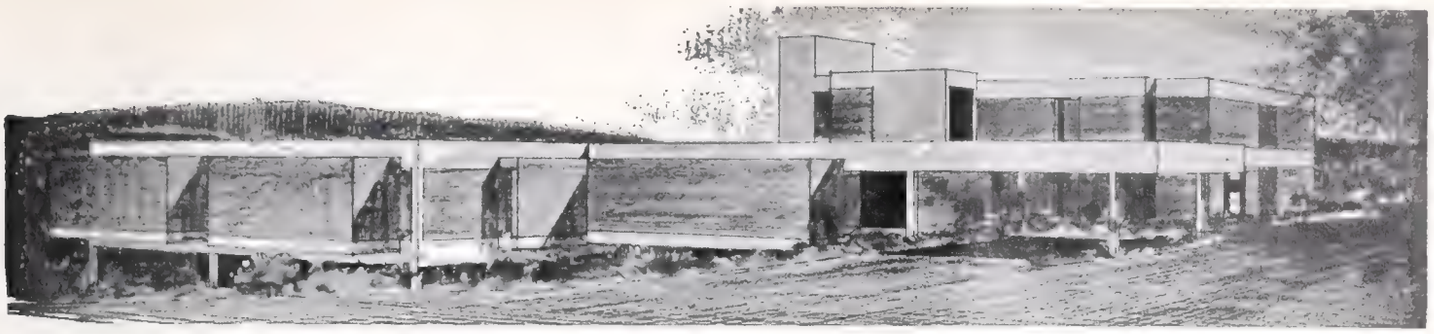

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Pediatric grand rounds: Evaluating head trauma in children

Edwin Jones, MD; Robert Zeller, MD; William Cheek, MD; A. A. Mintz, MD, Guest Editor

Head injuries are common in children. Management of each child must be individualized to properly observe, and if necessary proceed with diagnostic studies. In the case demonstrating suggestive evidence of intracranial complications, a familiarity with the sequelae of head injuries and neurosurgical consultation can be lifesaving.

Case Reports

Dr. Edwin Jones, Chief Pediatric Resident: A 7-year-old white boy was well until four hours before admission when he fell off a diving board and hit concrete 3.658 meters (12 feet) below. He did not lose consciousness. He vomited once, one-half hour before admission.

The physical examination on admission showed the following values: heart rate, 84 beats/min; respiration rate, 20/min; blood pressure, 110/64 mm Hg. The boy was alert and oriented to person, place, and time, and was in no distress. There was tenderness and ecchymosis over the right occipital area, and fresh blood was draining from the right ear canal. The pupils were equal, round, and reactive to light and accommodation; extra-ocular movements were intact. The fundi were normal. The remainder of the neurological and physical findings were normal except for a small abrasion over the medial surface of the lower left leg.

Results of complete blood count and urinalysis were normal. A roentgenogram of the skull showed a nondepressed linear fracture in the right parietal bone. The echoencephalogram showed no shift of midline structures, but the electroencephalogram was abnormal, exhibiting slightly slow alpha rhythm and a focus of spike discharge in the left posterior temporal or parietotemporal region. There was also an excessively prolonged reaction to overventilation.

After admission to the intensive care unit, the patient's neurological vital signs remained stable and there was no further drainage from the right ear canal. He vomited several times during the first 24 hours, and Tigan was prescribed for the vomiting although none was given. After 24 hours, he had no further vomiting. He continued to do well and was discharged on the sixth hospital day with no medication prescribed.

Case 2: An 8-year-old white male was brought to the hospital immediately following a car wreck. Upon admission he was pale, cold, unconscious, and unresponsive to pain. The blood pressure was 140/90 mm Hg and the heart rate was 112 beats/min. Both pupils were 3 mm in size and reactive to light; however, both eyes deviated to the right. The fundi were normal. One-half hour later the boy was able to move all extremities upon painful and vocal stimuli. He attempted to answer questions. There was no gross sensory deficit. The deep tendon reflexes were reactive (1+) in both upper and lower extremities; there was plantar flexion of the left foot, but plantar flexion of the right foot was questionable. An 8-cm transverse laceration in the occipital region was sutured. The child was given a tetanus toxoid injection and an antibiotic that was continued for the remainder of his hospital course. Roentgenograms of the skull showed fracture in the left posterior parietal region and in the lower portion of the lambdoid suture. On admission complete blood count and results of urinalysis were normal; the hemoglobin value was 12.2 gm/100 ml and hematocrit value was 36%.

The patient was taken to surgery immediately and a left parietal craniotomy was

performed. A large extradural hematoma was evacuated and a tear in the left petrosal sinus was sutured. A drainage catheter was inserted and the wound was closed with a left temporoparietal flap. During the procedure, the blood pressure became unobtainable and the patient received 500 cc of blood by transfusion. The systolic blood pressure rose to 50 mm Hg. Following surgery, the patient's hematocrit value was 28%, and another 500 cc of blood was administered.

Five hours after surgery, the patient's left pupil became dilated and the patient became more lethargic. There was bloody drainage on the dressing, and tension of the flap was noted. A recurrent extradural hematoma was evacuated. A branch of the middle meningeal artery, which was bleeding freely, was coagulated; there was no further bleeding. The wound was again closed with a left temporoparietal flap following insertion of the drainage catheter. Two units of blood were administered during the procedure. Following surgery, the left pupil contracted considerably and was almost the same size as the right. The patient also was more alert than at the beginning of surgery, and responded to verbal commands. He moved all extremities well.

One day later, he had retrograde amnesia for a 48-hour period prior to the accident. On that day, the left periorbital area was edematous and ecchymotic but this edema had resolved by the fourth hospital day, and his strength improved progressively. On the third day it was observed that the patient had partial palsy of the left third cranial nerve; the left eye appeared to be higher than the right. The patient began to walk on the fourth day. He continued to do well, except for diplopia, and was discharged on the 11th day of hospitalization.

Discussion

Dr. Robert Zeller, Pediatric Neurologist, Blue Bird Clinic, Methodist Hospital: Head injuries are common in pediatrics. Mealy[1] estimated that there were 200,000 children hospitalized each year for evaluation of head injuries, and that 5-10% of them exhibited some neurological signs. Dodge[2] reviewed the emergency room visits at St. Louis Children's Hospital for 1967, and found that there were about 500 children seen in the emergency room for head injury, of which 187 were admitted for observation.

The management of each child must be individualized, depending not only upon the pediatrician and the availability of hospital care, but also upon the reliability of parents and the form of injury that the child sustained.

Ommaya[3] carried out an experiment several years ago on monkeys. He placed the animal's head in a brace and then tried to produce unconsciousness by striking the head with a hammer blow of known force. He found that it took greater force to produce loss of consciousness with the head supported than if the head could move freely. If a child falls down and strikes his occiput, the inertia of the brain will carry it in a posterior direction. That means the brain is pulled away from the skull anteriorly and compressed against the skull posteriorly. The injury in the occipital lobe would be a coup injury; the injury in the frontal lobe or in the subarachnoid or subdural space anteriorly (anterior to the frontal pole) would be a contracoup injury. In the process of being squashed posteriorly in such an injury, the brain is greatly distorted, being compressed posteriorly but, more importantly, vessels that bridge the gap from the skull to the

meninges over the superior surface of the hemispheres can be sheared off easily. This mechanism can explain the occurrence of subdural and epidural hematomas that we sometimes see. In addition, there is a shearing force exerted on the brain stem. The brain stem is held firmly in place by the incisural notch of the tentorium which fixes around the brain stem at the mid-brain level. Since the brain stem is held relatively fixed, the force of the head and brain going backwards can act to shear or compress the blood vessels supplying the brain stem. Brain stem injury usually is responsible for the loss of consciousness. Loss of consciousness is not caused by the cerebral cortical injury directly, but by injury to the reticular activating substance in the mid-brain.

The cases presented illustrate one other point, and that is the importance of evaluating the whole patient and taking a history about a child with head trauma. It is important to obtain a past history as to whether the child has epilepsy, diabetes, or allergies. It is important to know if the child is unconscious secondary to a seizure (postictal state) or is unconscious from the fall. It is also important to review what occurred with whoever witnessed the event. How was the child injured? Where was he injured? Was he unconscious for a period of time? Did he have a seizure after the injury? Inquiry also should be made about injury to other parts, because this also may help explain the loss of consciousness. After a child injures his head, he frequently is lethargic. He may vomit and have a headache. These are all common manifestations and may persist for hours or even days after a simple head injury. The seizure that occurs immediately after a head injury has no significance as far as post-traumatic epilepsy is concerned, and does not require anticonvulsant therapy. Loss of consciousness is an important event to record and, unfortunately, the child who has the head injury will not recall it himself so it has to be reported by an observer.

One examines the patient on admission, recording vital signs and looking in the ears for evidence of blood. One also looks for evidence of spinal fluid coming from the nose. This may be difficult in a child who is crying and has tears coming through the nose, but if one takes a dextrose-sensitive stick and tests the fluid in the nose, one can then assess whether it has sugar in it or not. The presence of sugar indicates that it is spinal fluid as opposed to tears. It is also important to have one observer following the patient. What one writes down in a note is usually a brief summary of what one sees on examination. If the same observer follows the child, he may be able to evaluate the level of consciousness and detect subtle changes in the child's status. One looks especially for focal or lateralizing signs and changes in the vital signs; increased blood pressure, decreased pulse rate, and irregular respirations usually indicate increased intracranial pressure. Increased heart rate, decreased blood pressure, and irregular respirations frequently are signs of brain stem dysfunction, but are not specific indicators of brain stem dysfunction and may be seen in children who have extracranial hemorrhage, ruptured viscus, aspiration, sepsis, or even massive fat emboli. A dropping hematocrit value is an unreliable sign of intracranial bleeding except in the young infant, where one should see a bulging fontanel as a sign of bleeding in the head. The older child cannot lose sufficient blood intracranially to account for a significant drop in his hematocrit value. If the hematocrit value does drop in an older child, one has to

think of bleeding elsewhere. One also should monitor for signs of increased intracranial pressure which may not be present on admission. If they are present on admission, one has to consider that the child may have other causes of increased pressure prior to the fall. A poorly reactive or nonreactive dilated pupil implies third cranial nerve injury, which implies that the temporal lobe has partially herniated through the tentorium, trapping and compressing the nerve in its path. Since we are trying to following third nerve signs in acute head injury, the use of mydriatrics to facilitate examination of the fundi is usually contraindicated; however, if it has to be done for some reason, one then should make a note on the patient's record that these have been used. If they are used, they probably should be used bilaterally to avoid confusion later on. Pupillary changes can also be seen as part of a seizure, and one has to be aware that a child with a focal seizure may have pupillary dilatation. Pupillary changes also may occur in children who have a direct injury to the eye. The fundi should be examined for retinal hemorrhages, which suggest a subarachnoid or subdural hemorrhage.

Clinical Syndromes of Head Injury

The first is *concussion,* which means that there is a reversible neuronal dysfunction associated with the loss of awareness and responsiveness. That means unconsciousness. The unconsciousness may last for minutes or hours. Amnesia is almost always present in the child who has had a concussion. As time goes on after the injury the span of time of the amnesia shrinks, but it usually remains to some degree. Frequently, children have been told repeatedly what happened at the time of their head injury so they may relate to you later about what happened, but they do not truly recall the events. Concussion also implies that there are no focal signs.

When focal signs are present one must think of a *contusion,* which is a bruise, or a *laceration,* which is actually a break in the continuity of the brain itself. Contusions and lacerations frequently involve the poles, the frontal pole, and the occipital pole as well as the undersurface of the temporal lobes. We may not see focal signs in contusions and lacerations that occur in so-called "silent areas" of the brain.

Epidural and *subdural hemorrhages* are uncommon. A lucid interval frequently is seen in patients with epidural hematomas but this may not be seen. The child with acute bleeding following a head injury may lose consciousness without having any lucid period at all. It is said that about one-fourth of the children with intracranial hemorrhage do not have an associated fracture.

A skull fracture is an important sign. For instance, a linear fracture through the middle meningeal groove is associated with an increased incidence of epidural hemorrhages. Fractures through the base of the skull may not be demonstrated easily on routine x-ray examination, and one then must rely upon the finding of blood behind the tympanic membranes of the ear or spinal fluid coming out of the nose. These are both signs implying a skull fracture in the base of the skull, regardless of radiographic evidence. Intracranial air also means that there has been a fracture through the nasal sinuses or through the mastoid area or the ear, and does tell us that there is a fracture that we need to be concerned about.

Laboratory Evaluation

Roentgenogram of the *skull* is usually indicated in a child with a head injury, and it is certainly indicated in a child who has focal signs or has had loss of consciousness or a spinal fluid leak. In the child who simply falls down and starts vomiting and complains of headache, there is a question as to whether it is necessary to do a skull x-ray. My own feeling is that if there is any doubt about whether there is a fracture present, one should document it.

A child who has sustained a head injury causing flexion of extension of the neck may have associated cervical cord injury or cervical spine fracture, and one should look for them with proper *cervical spine radiographs.*

The question of a *lumbar puncture* is always raised in children who have had head injury. I think most people who observe children with a head injury will see that they frequently have mild nuchal rigidity and a low-grade fever. These findings make one concerned about the possibility of infection. However, one should not use the lumbar puncture as a means of testing increased cerebrospinal fluid pressure, nor to assess the severity of the head injury. It is common to find red blood cells in spinal fluid after a head injury, but this finding does not imply that there has been massive subarachnoid hemorrhage, subdural or epidural hemorrhage. It is not a useful tool and it is dangerous in patients with increased intracranial pressure.

If the child is significantly febrile (>39C) or has severe nuchal rigidity, I think a lumbar puncture is indicated to rule out the possibility of infection. If a child has a fracture through a nasal sinus, mastoid, or ear, one is again obligated to do a lumbar puncture to document the presence of infection in the meninges.

Transillumination in the young infant is not very helpful early because an acute subdural or acute epidural hematoma will not transmit light. Only after the hematoma has organized and the fluid has cleared to a chronic state will one get increased transillumination. A much more valid sign of increased pressure would be a bulging fontanel, in which case a subdural aspiration would probably be a more valuable test. The *electroencephalogram* may be helpful. It sometimes does help to find focal sites of injury or tell us if the child has had a brain stem injury. It may also be helpful in children who are suspected of having taken drugs and of having a head injury secondary to drug intoxication. It is also helpful sometimes in children who have been found unconscious and in whom a head injury is suspected. The echoencephalogram is useful if there are focal signs. It may be misleading if there are bilateral hemorrhages that do not cause any displacement of mid-line structures. In children, the *brain scan* is not very helpful, even if a subdural hematoma is present. *Cerebral angiography* is indicated in a child with focal signs or in a child whose neurological status is deteriorating.

Management

A child who has no loss of consciousness and has no fracture can certainly be observed at home as well as he can be observed in the hospital. The child with a fracture probably should be admitted, but I think that is a debatable point. Any child with loss of consciousness, focal neurological signs, or deteriorating status, of course should be admitted for observation and care.

In the hospital, intravenous fluids at a

low maintenance rate should be started with record of intake and output, vital signs, daily weights, and serum osmolalities because the possibility of transient diabetes insipidus or inappropriate antidiuretic hormone excretion may occur in any child who has had a significant head injury. Electrolytes should be checked frequently as well as the usual hemograms.

Vomiting is a frequent problem. One should not use drugs that sedate the child because they may confuse the neurological picture. A good drug to use is trimethobenzamide hydrochloride (Tigan).

Neurosurgical consultation is helpful whenever the attending physician is uncomfortable in management of a head injury, a depressed fracture, compound fracture, evidence of focal neurological signs, rhinorrhea, or otorrhea. Early consultation is desirable to enable the neurosurgeon to follow the child throughout the course, rather than seeing him first when he gets into trouble.

For the treatment of increased intracranial pressure we use dexamethasone or methylprednisolone (usual dose of dexamethasone is 10-12 mg or methylprednisolone 40-50 mg/M^2/day in four divided doses given intramuscularly or intravenously. The value of hyperosmolar agents such as mannitol is questionable. They are useful if the vascular structures and the blood-brain barrier are intact. They can cause an increase in the intravascular volume leading to congestive heart failure. If they do happen to get through the blood vessel wall, as they do in patients with a head injury, the result may be mannitol or urea in the extracellular, extravascular space. The extravascular fluid will be hyperosmolar and fluid will return to the extravascular space. This produces a rebound phenomena which may cause increased intracranial pressure and lead to even more difficulties.

Assisted ventilation is sometimes indicated and is helpful at times in decreasing intracranial pressure. Hypothermia may also help decrease cerebral swelling. For seizure prevention, I recommend diphenylhydantoin (Dilantin) in a dose of about 5 mg/kg/day, again trying to stay away from diazepam (Valium) or phenobarbital, which depress the level of consciousness and may confuse the picture.

Prognosis

The prognosis usually is good in that most children recover fully from head injury. Some children, however, have problems after head trauma. One of these is so-called *post-traumatic epilepsy* which occurs in about 10% of children who have had significant head injuries. The onset is usually between one month and two years after the head injury, and one should treat these patients as one would any other seizure disorder. The EEG taken at the time of the head injury is of little use in indicating post-traumatic epilepsy, so one has to wait until the child has a seizure and then record the EEG and begin therapy.

The treatment of chronic subdural hematomas is a surgical problem. The problem in some children who have had significant subarachnoid hemorrhage from their head injury may be that of *communicating hydrocephalus*. The *growing skull fracture* is caused by a fracture with separation of the dura at the site of the fracture and opening of the dura for the arachnoid and brain to protrude through the fracture site. This herniation does not allow the fracture to heal. Any child who has had a skull fracture should have a repeat skull x-ray three to six months after the initial injury to see if

there is any diastasis or separation of the fracture which will require later surgical intervention. One must remember that the older the patient the slower the healing of a skull fracture, so the infant may start healing within a period of weeks or months, but skull fractures in older patients may take months or years to heal, and in some adults skull fractures may never heal.

Post-concussion syndrome is a problem with some older children and adults. It consists of headache, vertigo, tinnitus, and neck pain. It may continue for weeks or months following a head injury. The headaches that are associated with this syndrome are frequently severe and difficult to manage. Fortunately, it does not occur frequently in children, except in teen agers.

Question: What about the management of the child with a simple head injury who is sent home for observation?

Dr. Zeller: I usually ask the parents to arouse the child once or twice during the night and just ask him his name and make sure he can move all extremities. I ask them to check his pupils for equality also.

Question: How long does it take to develop papilledema with increased intracranial pressure?

Dr. Zeller: It depends, to a great degree, upon how elevated the pressure is. It may take anywhere from hours to days for papilledema to develop.

Question: Are you opposed to the use of Valium intravenously for the treatment of seizures in the post-traumatic patient?

Dr. Zeller: I think that Valium is a useful drug for controlling seizures, but I think in a child who has seizures post-traumatically (immediately after or within 12-24 hours after a head injury) one doesn't have to worry so much about those seizures, and I would tend to prescribe Dilantin intravenously rather than use a drug that will sedate him and possibly result in confusion regarding his management.

Question: What restrictions do you place upon the child who has had a concussion as far as sports are concerned?

Dr. Zeller: I ask the parent to restrict his contact sports activity for one year, because I think that the possibility of the child's sustaining another concussion in that period of time is greater than in the child who has never had a concussion.

Dr. William Cheek, neurosurgeon: I think I would recommend that the child not play any more that season, which makes it a year, and then if they get another concussion the next year that should end participation in contact sports for life.

Question: If you have signs of subdural or epidural bleeding when you are practicing in an area where there is no neurosurgeon, with transit time of one to two hours, what should you do prior to or during transit?

Dr. Cheek: If it is a subdural hematoma you probably have time. If it is an extradural hematoma, the child may die because of the rapid bleeding into the area. It was not clear what precipitated surgical therapy for the child in case 2. I had been following him for about an hour or so in the emergency room and sewed up his laceration. He became increasingly more alert to the point where he really was vocalizing and responding well. However within 15 minutes he had a dilated fixed pupil and was unconscious, and that was when we got busy. The reason he didn't have any bleeding from the middle meningeal artery at the time of the original surgery was that his blood pressure was very low. As a footnote, we did a cranioplasty on that child about eight or ten months later, and he got the biggest hemorrhage under the plate I have ever seen and almost died. It was at that

point I called in a hematologist because there was something odd about this hemorrhage. Studies revealed then that the child had a fibrinogenopenia and a high fibrinolysin titer, which the hematologist considered to be secondary to his original trauma. This subsided in an additional six to eight months and we did his cranioplasty again and he had no problems at all.

The value of angiography in head injury is always debated. Certainly in a patient who has a deteriorating neurological state or developing focal neurological findings it should be seriously considered, and probably will be performed in most cases. The problem really arises when you get a child who is unconscious from the beginning and maybe doesn't have any focal neurological deficit to speak of, or at least you can't appreciate it because of the level of consciousness. The problem is whether or not to do the angiogram. Here, echoencephalography and clinical evaluation help. The presence or absence of an operable lesion can best be decided by angiograms.

As far as surgery is concerned, chronic subdural hematomas are nice lesions to treat. Older children essentially all get well and operation is relatively simple. An acute extradural hematoma involves a procedure such as this child had, usually a craniectomy, stopping the bleeding and evacuating the hematoma, and that usually is the end of it. It is an all or none sort of proposition. If you get there on time they do beautifully, and if not you have irreparable brain stem damage which has permanent residuals. This is one of the few occasions in neurosurgery where time really is of the essence as far as a matter of minutes is concerned. We don't see acute subdural hematomas nearly as often in children as we do in adults. That is usually a serious lesion because as a rule there is rather severe associated brain damage. All of us operate on these children and evacuate the hemorrhagic material, but these patients may not do very well. Chronic subdural hematomas in infants are a different subject.

There is one other lesion of which we are becoming more aware, and that is the posterior fossa subdural or extradural hematoma. Most of the diagnoses in that condition, unfortunately, are made postmortem, but if we have a high index of suspicion, we may be able to save some of those children. They have increasing deterioration of the level of consciousness, irregularity of vital signs, maybe some extraocular motor findings, and no other focal neurological findings.

Dr. Mintz: When you closed this child's scalp laceration (case 2), was his dura lacerated?

Dr. Cheek: No. The laceration was in the occipital region and the hematoma was in the temporal parietal region.

Dr. Mintz: Not over the fracture?

Dr. Cheek: No.

Dr. Mintz: Scalp lacerations frequently are closed without examining the depth of the wound, and not infrequently there might be a tear of the periosteum which indicates fracture. We've had some of these children develop meningitis, so I think the wound should be explored.

Dr. Cheek: The best time and the best way to find a depressed fracture is with the finger through an open wound. Once the wound is closed and there is edema of the tissues, it is difficult. Frequently someone will come to me and say, "This patient has a depressed fracture," and you go feel what he is referring to and it is the rim between the swelling in scalp tissues and the liquefied portion of the cephalohematoma. It feels very much like a depressed frac-

ture, but it is not.

Dr. Mintz: Do you believe that if we could hyperventilate a patient we could decrease the blood vessel volume and therefore the brain volume? Is this of value in acute head trauma?

Dr. Cheek: It seems to be. We haven't done much of it here. It is being done a lot at the University of Pennsylvania hospitals and other places in both adults and children. It is probably more difficult to control in children because of all the metabolic changes that can occur, but it really does affect brain volume, probably not just through vascular volume but other ways, and if it is well controlled it should be a helpful tool.

Dr. Mintz: Do you consider it worthwhile to use a respirator and hyperventilate as an acute procedure to try to alleviate increased intracranial pressure?

Dr. Cheek: It appears to be worthwhile.

Question: Would you talk about the use of caloric testing as a diagnostic tool?

Dr. Cheek: The caloric test is done in an effort to determine how severe brain stem damage is in a patient with head injury. Cold water is run into the ear on either side and the patient's eyes are observed for nystagmus, and if there isn't any nystagmus produced, the implication is that there is severe brain stem dysfunction, but I really don't know if that is 100% accurate or not.

Dr. Mintz: Please explain the "doll's eyes" sign and its meaning.

Dr. Zeller: In the comatose patient, the pupils are usually midline. If the head is turned to the right, the pupils will tend to stay straight ahead or deviate to the left and if the head is turned in the opposite direction, the eyes will then go to the right. In other words, they tend to look straight ahead, like the dolls that have the movable eyes and the eyes tend to look straight ahead. This same response will be seen in a vertical direction. This test relies upon the vestibular brain stem reflex. It is also known as the oculocephalic reflex. It is useful to rule out brain stem injury in the pons. It also is a method of checking the third and sixth cranial nerves.

One says doll's eyes movement is present when they move in all directions, and this is the normal finding in the comatose patient.

Question: Do you use antibiotics in cases of compound skull fracture?

Dr. Zeller: With a compound fracture antibiotics are indicated. In a child who has a skull fracture through the nasal sinus, mastoid, or middle ear, my usual thought is to go ahead and treat them, although other people say to just observe and see if they develop any evidence of meningitis.

Question: What antibiotics do you use?

Dr. Zeller: The organisms most often observed are gram positive cocci (staphylococci, streptococci and pneumococci). One may choose accordingly; I use Methicillin.

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Reprints not available.

The acute renal failure syndrome

G. Eknoyan, MD

Acute renal failure is a syndrome of diverse etiologies in which the patient's renal excretory function is unable to maintain the normal homeostatic functions of the kidney. It is by definition a self-limited disease from which the patient will recover if he maintains relatively stable health and does not succumb either to the complications of the disease or to its precipitating causes. Its importance stems from the acuteness and severity of the clinical manifestations with which the patient usually presents, and the potential reversibility of the condition.

Acute renal failure came into its own after it became the subject of intensive study in the bombing and battle casualties of World War II. The masses of tubular pigment or debris and areas of frank tubular necrosis led to the use of the term "acute tubular necrosis." Such a designation, however, presumes that the tubular lesions are always present and are the specific abnormality accounting for the acute failure of renal function. However, although tubular damage may be observed in the majority of instances of acute renal failure, it is by no means universally present. More importantly, pronounced tubular abnormalities may be present in patients who are neither azotemic nor oliguric. In addition, diseases of different etiologies but with no associated tubular lesions, such as cortical necrosis, acute glomerulonephritis, and eclampsia, may present with the same clinical picture. From the clinical standpoint therefore, the use of "acute tubular necrosis" is not always justifiable. Perhaps a better understanding of this syndrome can be achieved by a review of the usual classification of acute renal failure into three categories: prerenal, renal, and postrenal (Fig 1).

Prerenal (Functional Renal Insufficiency)

This is usually present in patients with vascular collapse or circulatory insufficiency. In their attempt to preserve the effective circulating blood volume, the kidneys sustain severe functional changes without demonstrable organic or structural damage. The most important of these changes is severe but reversible renal vasoconstriction with preferential renal cortical underperfusion. The resultant reduction in renal blood flow may be associated with reduced glomerular filtration and thus a decreased filtration of solutes. In addition, a greater fraction of this filtrate (urea, water, sodium) is reabsorbed proximally under the influence of the volume stimulated factors which normally control proximal tubular reabsorption. Finally, there usually is a simultaneous stimulation of antidiuretic hormone secretion in response to volume changes; thus, oliguria results. The urine is characteristically highly concentrated and low in sodium content (Fig 2). The azotemia that may be present is the result of increased proximal reabsorption of urea and may develop in the absence of a drop in glomerular filtration rate.

The use of the term "prerenal failure" has been criticized because of the connotation that something before the kidney fails. Alternative terms which have been suggested are "acute renal insufficiency," "acute renal decompensation," or preferably "functional renal insufficiency." All of these terms underscore the fact that there is no intrinsic renal abnormality, and that the impairment is functional and readily reversible by treating the underlying circulatory defect. When renal circulation is restored, these patients respond with a prompt diuresis with correction of the azotemia and oliguria.

An important aspect of the prerenal

A. Prerenal or functional renal insufficiency
   1. Salt depletion
      a. Gastrointestinal loss: vomiting, diarrhea
      b. Sequestration
         (1) Burns
         (2) Gastrointestinal: pancreatitis, peritonitis
   2. Hemorrhage
   3. Anoxia in presence of salt depletion
   4. Central or cardiac shock
      a. Congestive heart failure
      b. Myocardial infarction
      c. Central nervous system injury
   5. Septicemia

B. Renal or vasomotor nephropathy
   1. Nephrotoxins
      a. Drugs: sulfas, quinine, kanamycin, gentamycin
      b. Poisons
         (1) Heavy metals: mercury, arsenic
         (2) Carbon tetrachloride, propylene glycol, bismuth
         (3) Radiopaque dyes
         (4) Animal toxins: viper
      c. Respiratory pigments
         (1) Hemoglobin: hemolysis
         (2) Myoglobin: crush injury
         (3) Ischemic: consequent to uncorrected prerenal causes
         (4) Acute glomerulitis: post-streptococcal, periarteritis, lupus nephritis, malignant hypertension, eclampsia
         (5) Acute pyelonephritis: papillary necrosis
         (6) Intrarenal precipitation: sulfas, urates, calcium, myeloma proteins

C. Post-Renal
   1. Prostatic hypertrophy
   2. Bladder, pelvic or retroperitoneal tumors
   3. Renal calculi, pus, blood clots
   4. Ureteral blockage after instrumentations
   5. Retroperitoneal fibrosis

1. Major causes of acute renal failure.

acute renal failure is that it represents an earlier and reversible change in renal circulation which, if left uncorrected, may ultimately lead to organic renal damage (Fig 2). While this category of acute renal failure may be identified by the frequent accompanying signs of peripheral circulatory failure and low effective circulating volume, the composition of the urine is the main clue to its diagnosis. The urine is characteristically low in sodium content ($<$10 mEq/liter), high in concentration (Uosm $>$900) and has a urine: plasma urea ratio greater than 10:1.

Renal (Vasomotor Nephropathy)

This is the more common characteristic form of acute renal failure and one that comes to mind when the term acute renal failure is mentioned. It is characterized by severe functional changes associated with acute structural damage. The impending but reversible renal failure has now become an established form of acute renal failure. It is not immediately reversible by treatment of the predisposing factors, but rather has to heal spontaneously (Fig 2).

Examination of the patient's urine gives extremely valuable clues to the diagnosis of acute renal failure. In contrast to prerenal failure, in the renal phase the urine sodium is above 20 mEq/liter and the osmolality ranges from 320-350 mOsm/Kg H_2O. In addition, the urinary sediment, which is usually negative in prerenal failure, now contains numerous tubular cells, tubular casts, coarsely granular casts, red blood cells, and white blood cells.

Once established, this category of acute renal failure pursues a characteristic course which is divided into three phases: oliguric, diuretic, and late.

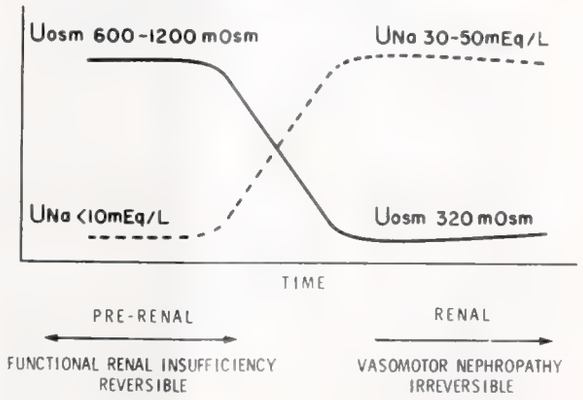
Oliguric Phase

A cardinal feature of acute renal failure is the reduction of urine volume. This phase is defined as the period during which the 24-hour urine volumes are 300-600 ml or less. While the cause of the oliguria has been the subject of intensive investigation, no single explanation for the oliguria can be offered. The factors which initiate acute renal failure may not be identical to those which maintain it. The possibility that renal vasoconstriction might contribute to the development of oliguric acute renal failure was considered in the early part of the century. During World War II, opinion changed and tubular necrosis and loss of tubular integrity, with consequent tubular obstruction and back diffusion of tubular fluid, came to be considered as the primary causes of the oliguria. With the development of micropuncture techniques, however, it became evident that it is the cessation of filtration or failure of glomerular filtration function which characterizes the oliguria of acute renal failure, and the early theory of ischemia was revived. The magnitude of reduction of renal blood flow in patients with acute renal failure is inadequate to account for the observed total failure of renal filtration function. While renal blood flow is generally reduced to one-third of normal, a reduction of similar magnitude in patients with chronic renal failure and congestive heart failure can support life and does not always result in oliguria.

The major hemodynamic alteration is not only reduction in renal blood flow to one third, but more importantly it is the pattern of intrarenal perfusion characterized by absent or reduced cortical perfusion. On arteriograms, severe attentuation of the interlobar and arcuate arteries accompanied by the absence of a distinct cortical nephrogram and of identifiable arterial vessels beyond the arcuate arteries is seen. The increase in renal cortical resistance may be sufficient to reduce glomerular capillary pressure so that it is no longer adequate to sustain glomerular filtration. This active vasoconstriction has been attributed, in part at least, to alpha adrenergic stimulation and release of catecholamines. Several more recent observations support a central role for renin-angiotensin in sustaining the vasoconstriction. Clinical conditions in which acute renal failure is likely to develop are frequently characterized by increased renin levels. Conversely, sodium loading, which is known to reduce renin, is capable of protecting experimental animals from acute renal failure. In man, the peripheral plasma levels of renin and angiotensin usually are raised early in acute renal failure. During the second and third week of the disease, these values usually decrease toward or into the normal range despite persistent renal failure.

In view of the several lines of evidence for the different factors, it seems most likely that acute renal failure involves mul-

2. The usual course of urine osmolality (continuous line) and urine sodium concentration (interrupted line) in acute renal failure.

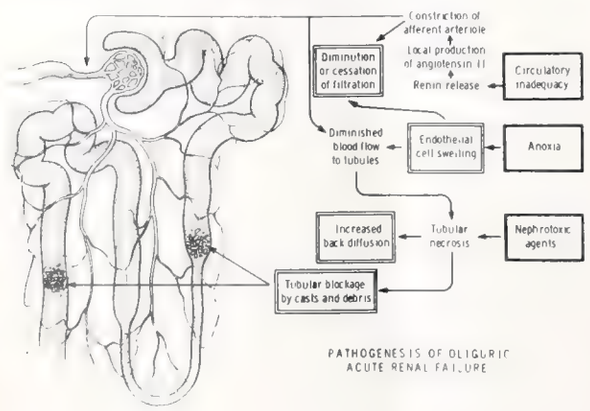


tiple pathogenic factors, including obstructing casts, catecholamines, back diffusion, and renin-angiotensin (Fig 3). More recently, endothelial cell swelling has been added to this list, with its consequent secondary obstruction of the renal microvasculature sustaining a patchy ischemia of the kidney after correction of the initial systemic episode.

The early part of the oliguric phase may go unrecognized unless the urinary output is being monitored. It is therefore important to monitor the hourly urine output in patients with suspected or incipient renal failure. Once the diagnosis is established, however, hourly monitoring of the urine output is of no additional diagnostic value, and because of the potential for urinary tract infection, urethral catheterization is best avoided.

While oliguria lasting more than two months has been reported, the oliguric phase usually lasts 7 to 14 days after which the patient enters the diuretic phase. The duration of oliguria is of some prognostic significance, with the longer duration carrying a greater chance of complications and, therefore, a fatal outcome.

3. Factors contributing to the development of oliguric acute renal failure.



Diuretic Phase

The diuretic phase begins with a 24-hour urine volume over 500 ml/day. Classically at this point, urine volume doubles on successive days until a volume of 2,000-3,000 ml is reached. This phase lasts from 7 to 14 days. Together with the onset of diuresis, the renal blood flow and glomerular filtration rate gradually rise. At first the urine appears to be pure plasma filtrate, for the total concentration of urine and each of its constituents is identical with that of plasma. As the tubules recover some ability to reabsorb sodium and concentrate urea, the urine will gradually contain less sodium and more urea than plasma. Consequently, the blood chemistry values will not begin to correct with the onset of the diuretic phase, and it may be a few days before these values begin to normalize. However, as diuresis continues, the azotemia gradually diminishes.

Factors contributing to the diuresis observed in this phase include the following:

1. Osmotic diuresis resulting from mobilization of the urea accumulated during the oliguric phase.
2. Functional inadequacy of the tubules to reabsorb the glomerular filtrate and concentrate urine.
3. Mobilization of the edema fluid accumulated during the oliguric phase.
4. "Pushing" intravenous fluids. The overzealous replacement of urine output maintains the patient in a continuous state of volume expansion with the kidney responding appropriately by excreting the infused fluid. Thus one ends up "chasing" the urine output by infusing gradually larger volumes of fluid. It is for this reason that urinary outputs of over 40 liters/day were reported in the past. Now, with more judicious replacement, urine outputs rarely exceed 4,000 ml/day.

Another form of "nonoliguric" or "high output" renal failure also has been described. First reported in burn patients, it is beginning to be seen with increasing frequency, particularly in antibiotic-induced nephrotoxicity. While seemingly analogous to the diuretic phase of acute renal failure, this entity is quite different and should not be considered equivalent to the diuretic phase of classic acute renal failure where the azotemia diminishes as urine volume increases. Rather, the "nonoliguric" or "high output" acute renal failure is characterized by rising blood urea nitrogen and creatinine levels, while the urine output is normal or high. This is because of tubular damage without the accompanying severe cessation of filtration. The kidney is, therefore, unable to concentrate the urine sufficiently to excrete the solute load, and can respond only by increasing the urine output.

Late Phase

The blood urea nitrogen and creatinine values usually are normal 5 to 60 days after the onset of diuretic phase. Glomerular filtration, however, increases more slowly and is 70-80% of normal within one to two years. Ability to elaborate a maximally concentrated urine will return, but may take several months. Usually, the only renal symptoms during this phase are nocturia and polyuria which gradually disappear as the ability to concentrate urine improves. As a rule there is no evidence of progressive renal disease in recovered patients, although some mild loss of renal function continues to occur during several years in some patients.

Although urinary tract infection is common during the oliguric phase because of urethral catheterization, evidence for chronic infection in the last phase is rare.

Postrenal Failure

This category includes all causes resulting in mechanical obstruction of the urine flow distal to the renal parenchyma proper. It is important because it is immediately remediable by early relief of the obstruction. Its outstanding feature, which may be of value diagnostically, is anuria (<100 cc/day), which at times is succeeded by massive polyuria only to be followed by recurrence of the anuria. Other differentiating features are a history of renal colic or flank pain, absence of or minimal proteinuria, and a serum urea nitrogen level higher than expected for the accompanying creatinine value. The latter is partly the result of reabsorption of urea by the urinary tract mucosa from the stagnated urine.

Unless the cause of the renal failure is definitely known, once the possibility of acute obstruction is entertained (in other words, it cannot be ruled out), ureteral catheterization to establish patency is obligatory.

Treatment

The availability of renal dialysis techniques has undoubtedly contributed greatly both to the management and recovery from acute renal failure. The latter point is particularly evident when one compares the drop in mortality figures from 91% during World War II, when dialysis was not available, to those of the Korean and Vietnam conflicts, after dialysis became available, when the figures were in the range of 63-68%. Thus, the extensive use of dialysis during the past two decades has improved the prognosis of acute renal failure. What is disappointing, however, is that for a potentially reversible disease, this figure has not improved further. Today, 25% mortal-

ity in general medical cases and 60% mortality in surgical or post-traumatic cases is still the case. The majority of patients with acute renal failure die of their underlying basic disease. Indeed, when mortality figures do not include those who died from their underlying basic disease, the value of dialysis becomes all the more apparent. Systemic sepsis continues to be the single complication most responsible for death in acute renal failure, and the importance of prophylactic and therapeutic measures cannot be emphasized enough.

Despite the advent of hemodialysis, sound physiologic management regimens continue to be of major importance since dialysis may not be readily available. Furthermore, dialysis should not be undertaken simply because of its availability at the expense of well established conventional therapeutic principles. These can be divided into two phases corresponding to the two phases described under the clinical course of vasomotor nephropathy.

Oliguric Phase

I. Water Requirement

A. Restrict water to a volume equivalent to urine output plus extrarenal loses (gastrointestinal suction, diarrhea, drainage)

B. Insensible losses (800 ml) must be restored. Considering the endogenous water production of 350-400 ml/day, only 400-500 ml of fluid need be administered.

C. Water requirement increases with high ambient temperature, fever, and low relative humidity.

D. Adequate fluid replacement can perhaps be best followed by:

1. Daily weights: Since acute renal failure is a catabolic state the patient should lose about 0.5 kg (1 lb) day. Any weight gain can represent only excess fluid administration.
2. Serum sodium concentration should remain 135-145 mEq/liter. A rise in serum sodium level would indicate inadequate water replacement, while a drop would reflect excess water replacement.

II. Caloric Requirement

A minimum of 100 gm carbohydrate must be administered to prevent endogenous catabolism. If tolerated, larger amounts are preferable. To prevent rises in blood urea nitrogen levels, no protein should be permitted.

III. Sodium Chloride Requirement

Sodium chloride usually is not required after initial replacement during the prerenal phase when the patient presents with vascular collapse. The guiding principles of sodium chloride replacement are:

A. Body weight loss in excess of 300 gm/24-hours with a continued normal serum sodium level should prompt replacement, milliliter for gram, with isotonic saline solution.

B. Gastrointestinal suction, diarrhea, drainage, and continued sequestration necessitate replacement with isotonic saline solution.

C. If acidosis exists, salt losses should be replaced by sodium bicarbonate.

IV. Potassium Requirement

Potassium intake must be restricted. Small deficits should not be replaced. Hidden sources of potassium must be kept in mind (for example stored blood from a blood bank, and potassium salts of penicillin and other drugs).

Hyperkalemia, if present, can be best

treated with correction of the acidosis which usually is an accompanying derangement and with exchange resins (Kayexalate). Hyperkalemia is always an indication to consider dialysis as early as possible.

V. Blood Transfusions

Anemia may develop within a week of onset of acute renal failure in severe cases. It is usually due to a combination of factors including hemodilution, suppressed erythropoiesis, hemolysis, and hemorrhage. No treatment is indicated unless the hematocrit value is less than 20%. Treatment is best accomplished with fresh packed cells in order to avoid volume expansion and the free potassium of stored blood.

VI. Infection

Infections are the most frequent cause of death in acute renal failure. Use of isolation techniques, care of intravenous catheters, cleaning and drainage of wounds, and avoidance of unnecessary urethral catheterization must be adhered to closely and carefully.

VII. Hypertension

This is almost invariably a reflection of sodium excess and fluid overload. If it does not respond to the judicious use of salt and water as described under I and II, hydralazine or methyldopa may be required.

Diuretic Phase

At present, more than 30% of deaths occur during the diuretic phase. Dialysis often has to be continued through this phase until the predialysis blood urea nitrogen level starts dropping well below 100 mg/100 ml and there are no problems associated with hyperkalemia resulting from increased tissue injury. Sodium and potassium balance must be followed closely by means of body weight and daily serum concentrations, applying the principles outlined under the oliguric phase. While urinary losses must be replaced, pushing of fluids must be avoided. This can best be accomplished by replacing urine output no more frequently than every 8-12 hours. The volume should be two-thirds of the previous 8-12 hours' output in order to prevent the continued overexpansion of extracellular fluid often present.

It is important to remember that many drugs are still poorly excreted during the diuretic phase, and dosage adjustments may be necessary if drug toxicity is to be avoided.

Finally, two recent developments in the treatment of acute renal failure deserve special comment:

1. The use of "high ceiling" diuretics to increase the urine output of patients with incipient or established acute renal failure has been advocated, and unfortunately it is in vogue in some circles. Its use in incipient (prerenal) renal failure, can only result in aggravation of the compromised circulatory volume by causing further sodium and fluid loss. The treatment in those conditions is fluid replacement and maintenance of an adequate central venous pressure rather than the potentially self-defeating increase in urine volume. Its use in established (renal) renal failure, while relatively more justifiable since the disease has already entered a nonreversible phase, is at best equivocal since the diuresis that may ensue is not necessarily of therapeutic significance. That diuresis occurs in some cases of established vasomotor nephropathy has been shown in several studies. There is, however, no associated improvement in glomerular filtration rate, and the need for dialysis cannot be precluded. In experimental studies, the use of diuretics

has been shown to be actually harmful when administered in conjunction with nephrotoxic antibiotics. Moreover, it is in patients with acute renal failure that large doses of both agents have been shown to cause ototoxicity. Thus, the value of furosemide and ethacrynic acid in patients with acute renal failure is far from established, and is at best of limited value and at worst may prove to be actually harmful.

Perhaps the only condition where it may be used beneficially is in the patient with cardiac decompensation where a beneficial effect of diuresis on improvement of cardiac function may be expected.

2. The infusion of essential L-amino acids and hypertonic glucose prevents or delays the development of azotemia. If available, this should be of particular value in the postsurgical and trauma patients where the hypercatabolic state undoubtedly contributes to the rapid development of uremic syndrome and hyperkalemia.

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Dr. Eknoyan, Professor of Medicine, Baylor College of Medicine, Houston, Texas 77025; and Chief, Renal Section, Houston VA Hospital, Houston, Texas 77031.

This series on renal disease is being coordinated by Dr. Marvin Forland, Professor of Medicine and Chief, Division of Renal Diseases, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78284.

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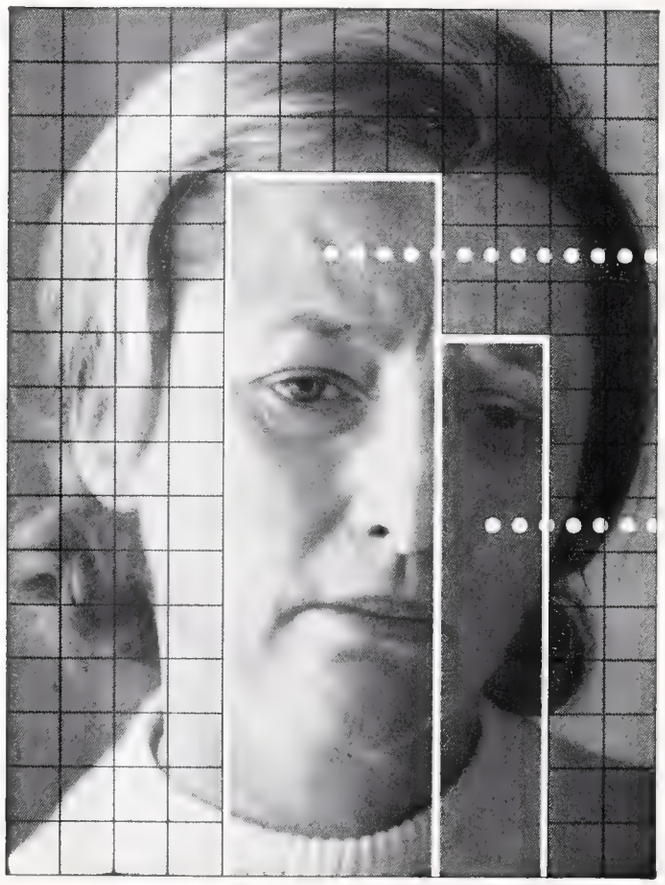

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in freque and/or severity of grand mal seizures require increased dosage of standard a convulsant medication; abrupt withdra may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous gestion of alcohol and other CNS depre sants. Withdrawal symptoms (similar t those with barbiturates and alcohol) ha occurred following abrupt discontinua (convulsions, tremor, abdominal and m cle cramps, vomiting and sweating). K addiction-prone individuals under care

respond to one

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nptoms, she is a psychoneu-
tic patient with severe
xiety. But according to the
scription she gives of her
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ay sound like depression.
his is because her problem,
hough primarily one of ex-
ssive anxiety, is often accom-
nied by depressive symptom-
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n provide relief for both—as
e excessive anxiety is re-
ved, the depressive symp-
ms associated with it are also
ten relieved.

There are other advan-
ges in using Valium for the
anagement of psychoneu-
tic anxiety with secondary
pressive symptoms: the
ychotherapeutic effect of
alium is pronounced and
pid. This means that im-
ovement is usually apparent
the patient within a few
ys rather than in a week or
two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

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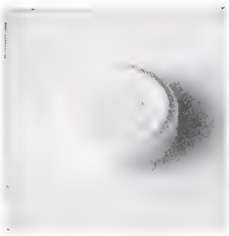

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d other antidepressants may potentiate
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tients severely depressed, or with latent
epression, or with suicidal tendencies.
Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Medical care costs: know the facts

Mention the cost of medical care these days, and you're likely to find yourself in the middle of an argument. The best way to handle any controversy is to have a look at the facts.

Some figures prepared by the Center for Health Services Research and Development of the American Medical Association help put medical care costs into perspective. Table 1 shows the percentage changes for selected items of the Consumer Price Index (CPI) from the beginning of controls through this past July. A major point illustrated by this chart is that physicians' fees have increased 16.1%, less than prices in the health care sector, the CPI "all services" category, the "all items" category, and legal fees.

An overview

Various elements comprise the pattern of physician fee increases since 1960. For instance, from 1960 to 1965, physicians' fees rose at an annual rate of 2.8%. This rate was higher than the CPI "all items" and "all services" categories, but less than the rate of increase for hospital daily service charges. In addition, in the years following the passage of Medicare (1966-1970) physicians' fees and hospital daily service charges rose rapidly and at a greater rate than the CPI as a whole. Beginning with the inception of the Economic Stabilization Program and continuing through 1973, the CPI increased at a greater rate than physicians' fees.

Statistics indicate that the medical care sector achieved a high level of compliance with the Economic Stabilization Program from August 1971 through April 1974. Both physicians' fees and hospital semi-private room charges showed a significant decline from their former rates of increase. During each of the four phases, physicians' fees and hospital service charges increased at rates less than that of the "all items" category of the CPI.

Cost controls

The fee increases for each phase of controls follows (see Table 2):

Phase I. Physicians' fees showed a decline from former rates of increase. This was true of the economy as a whole.

Phase II. Physicians' fees increased 2.4%, less than the 2.5% goal set by the Economic Stabilization Program. It was also less than one-third the corresponding rate of increase for 1969 and 1970.

Phase III. The medical care sector operated

Table 1
PERCENTAGE CHANGES IN SELECTED ITEMS OF THE CONSUMER PRICE INDEX FOR SELECTED MONTHLY INTERVALS FROM AUGUST, 1971 THROUGH JULY, 1974

	All Items	All Services	Medical Care	Hospital Semi-Private Room Charges	Physicians' Fees	Legal Fees
Aug 71 - Dec 71	0.7	1.1	0.0	1.2	0.7	5.6
Aug 71 - Mar 72	1.4	2.0	1.0	3.8	1.3	6.0
Aug 71 - June 72	2.2	2.9	1.8	4.8	2.0	12.5
Aug 71 - Sept 72	3.2	3.6	2.4	5.9	2.4	12.3
Aug 72 - Dec 72	4.1	4.7	3.3	6.3	3.2	14.3
Aug 71 - Mar 73	6.2	5.6	4.4	8.6	4.2	17.4
Aug 71 - June 73	8.3	6.8	5.4	9.4	5.2	19.1
Aug 71 - Sept 73	10.8	8.7	6.4	10.7	6.4	23.0
Aug 71 - Dec 73	13.3	11.2	8.7	12.4	7.3	26.2
Aug 71 - Mar 74	17.1	13.6	11.4	15.4	10.5	29.0
Aug 71 - June 74	20.4	16.6	14.9	19.7	14.6	31.1
Aug 71 - July 74	21.4	17.8	16.5	22.2	16.1	32.8

Source: Consumer Price Index (Bulletin) for Data Months Dec 1971; March, June, Sept, Dec 1972; March, June, Sept, Dec 1973; March, June 1974. Oral Communication, Bureau of Labor Statistics, Washington, DC, Aug 21, 1974 for July, 1974.

Prepared by the Center for Health Services Research and Development, American Medical Association, Chicago, Aug 21, 1974.

Table 2
Annual Rates of Change of the Consumer Price Index and the Medical Care Components during Phase I, II, III and IV and the Post Control Period

Items of CPI	Annualized Rate of Change					
	Phase I	Phase II	Phase III	Phase IV		Post Controls
	Aug-Nov 1971	Nov 1971-Jan 1973	Jan-June 1973	June 1973-[a] Jan 1974	Jan-April[a] 1974	April-July 1974
All Items	1.6	3.6	9.1	9.6	13.0	12.6
All Services	3.2	3.6	4.3	8.5	8.7	13.0
Medical Care	−.8[b]	3.4	3.8	6.6	10.0	17.0
Hospital Service Charges[c]	N.A.	3.6	4.0	4.9	9.1	17.9
Semi-Private Room	2.8	5.4	5.2	6.7	7.8	23.9
Operating Room Charges	6.1	7.8	7.8	5.2	16.1	17.9
Physicians' Fees	2.4	2.4	4.1	4.1	13.4	18.8

a—During the first part of Phase IV (June-Jan) the medical sector was under Phase III regulations. During the second part (Jan-April) the medical sector was under Phase IV regulations.

b—The decreases are due to the annual adjustment in the medical care index for the price of health insurance which is not shown as a component of the index but is a factor used in calculating the monthly index.

c—January 1972 = 100. Phase II annualized rate of change based on percentage change since January 1972 rather than November 1971.

Source: Consumer Price Index (Bulletin) for all months except July which was oral communication from Bureau of Labor Statistics, Washington, DC, Aug 21, 1974.

under Phase III regulations for all of 1973. The rest of the economy was placed under Phase IV in July. During the year, the "all items" category increased at a rate more than doubling the increase for physicians' fees.

Phase IV. From January 1974 through April 1974, physicians' fees increased at an annualized rate of 13.4%. Hospital semi-private room charges increased 7.8%.

Post controls. Several factors have influenced the cost of medical care during the past several months: 1) physicians who experienced substantial increases in operating costs during the last three years were unable to "pass-through" these costs in the form of increased fees under the Economic Stabilization Program; 2) with the termination of controls, medical practices came under increased pressure from their employees for substantive salary adjustments; and 3) physicians in recently formed practices were unable to increase their fees in line with increases in their experience, ability, as well as added operating expenses. During May, June and July, 1974, physicians' fees reflected a 4.4% increase in order to adjust for these factors.

Latest figures, for the month of September, showed physicians' fees trailing behind the general CPI. Physicians' fees rose 1% compared to the 1.1% rise in the "all items" and "all services" categories of the CPI. The rate of increase for other components of the medical care category also declined during this period.

Know the facts

When engaged in controversy or in discussion on medical care costs, physicians should remain mindful of these three key facts and figures:

1. For the three-year period from August 1971 through July 1974, physicians' fees increased by 16.1%. During that same period, all items in the CPI increased by 21.4%. Few other professions or groups can match medicine's record. Legal fees increased by 32.8%.
2. During each of the four phases of the Economic Stabilization Program, physicians' fees increased at rates less than that of the "all items" category of the CPI.
3. A period of adjustment followed the lifting of controls; however, the September index again reflected a lower rate of increase for physicians' fees than for the general categories used to measure the cost of living.

Physician awareness of the facts regarding medical care costs is essential today, when there are pending congressional proposals which would change the entire system of health care delivery in this country.

LEGAL PROTECTION: FACTS YOU SHOULD KNOW

Sam V. Stone, Jr.
TMA Office of General Counsel

MORE ON INFORMED CONSENT

In recent years, the instance of malpractice litigation based upon an alleged failure of the physician to secure "informed consent" has been rising dramatically. The vast majority of the litigation in this area of the law involves a plaintiff's contention that he was not informed of the facts relating to his condition prior to his surgery, that the physician failed to make a reasonable disclosure of those risks that are incident to the medical diagnosis and treatment, that the physician guaranteed or otherwise assured the patient of complete recovery or success of the procedure, or that no alternative methods of treatment were discussed with the patient.

It is impossible to over-emphasize the importance of rapport between the physician and his patient as the surest way of preventing malpractice litigation. "Informed consent" can almost never be secured by a hospital admissions clerk or other such person acting for the physician. Consent should be granted by the patient directly to the physician, and this consent should be reduced to writing.

While even the most detailed and explanatory consent form may lessen the chances of a later claim by the patient, the form alone will not serve to absolutely insulate the physician from a law suit.

Nevertheless, relatively comprehensive consent forms should be used by the physician, and such consent forms should be executed and witnessed, and retained with the patient's records.

In addition to the form for "Consent to Operation, Anesthetics, and Other Medical Services," printed in this column in May 1974, the following statements may be added to the general consent form when applicable in individual situations:

—I understand that Dr._____ is a general practitioner of medicine (or is in the family practice of medicine) in_____, Texas, and
(name of city)
is not an anesthesiologist or a specialist in the administration of anesthesia.

—I authorize Dr._____ or his associates or assistants to install a prosthesis within my body made of the following material:_____. I recognize that there is no adequate substitute for normal bone and that there is a possibility of breakage or complications such as infection and pain. I also understand that the complications that may often arise require removal of the prosthesis and further surgery. No guarantee or assurance has been given as to the results that may be obtained.

Where the use of radioisotopes is anticipated, the following statement may be used in conjunction with the general consent form or incorporated into a separate consent from:

I authorize Dr._____, and such assistants as he may designate, to administer a (tracer) (therapeutic) dose of _____to _____.
(myself or name of patient)
The uncertainties and nature of this treatment and the risks of injury despite precautions have been explained to me. I voluntarily accept the risks involved and agree that the above named physician, his assistants, the hospital and its personnel shall assume no responsibility for the results of this treatment or its interpretation.

In most instances, consent to x-ray therapy should be secured separately from the "Consent to Operation, Anesthetics, and Other Medical Services." However, in the event that consent for x-ray therapy is to be secured simultaneously, the following paragraph might be included within the general consent form:

I hereby request and authorize Dr._____ _____ and whoever he may designate to assist him to administer x-ray treatment to_____
(myself or name of patient)
and to continue such treatment from time to time, and such other treatment, as he may deem advisable. The effect and nature of this treatment has been fully explained to me, as well as the possibility of injury. Notwithstanding the fact that there are risks of injury inherent in this treatment, I voluntarily accept the risks involved.

MEDICINE AND THE LAW

FINDING OF DIRECT CAUSE OF INJURY NECESSARY TO ASSESS DAMAGES TO PHYSICIAN

In a malpractice suit brought by the mother of a child who had swallowed a chicken-bone, a Texas jury's findings were upheld to the effect that one physician's failure to perform x-rays, to refer a patient to a specialist, to advise as to the possibility of an object in the lung, and to perform bronchoscopy was not the proximate cause of the child's injuries. In addition, it was held that a second defendant's failure to diagnose, to perform bronchoscopy, and to refer the patient to a specialist was not negligent.

FACTS: The plaintiff had observed her 18-month-old son swallow a chicken bone. The child gagged, coughed, and appeared to have difficulty in breathing. The mother gave the child first aid and took him to a hospital emergency room to see a physician. At that time the child's symptoms had disappeared, and the doctor, after examining the child's throat and lungs, did not hospitalize the child. Three days later the mother again took the boy to the same emergency room because he was coughing and running a high temperature. The same physician was again on duty. He testified that he did not remember the child, although the plaintiff testified that she told him about the chicken bone. The physician diagnosed bronchitis and prescribed penicillin. X-rays were not taken either time.

Two days later the mother took her son to the emergency room of another hospital where he was seen by the second physician defendant. The plaintiff informed the second physician of the chicken bone incident. X-rays were taken that night and again the next day after the child had been admitted for treatment. The second physician reached the medical opinion that the child had pneumonia in the left lung. From his examination of the x-rays he felt that there was a question as to whether they showed the presence of the chicken bone in the base of the right lung. The second physician did not refer the boy to a specialist at the time because of the pneumonia. The second physician was a resident physician in pediatrics. He testified that following admission, the child was no longer his responsibility but the responsibility of two interns who were responsible to the staff doctors.

The child was discharged from the hospital after ten days but was readmitted five days later suffering from fever and poor breathing. Subsequently, a bronchoscopy was performed by a nondefendant physician, and a chicken bone was discovered and removed from the base of the child's right lung.

The trial court entered a judgment for the defendants based upon the jury's answers to special issues and the appellate court subsequently affirmed that decision in favor of both physician defendants.[1]

DISCUSSION: In response to questions the jury found that the first physician's failure to x-ray was negligent and that his failure to advise the plaintiff "of the possibility that the chicken bone could be in the minor child's lung" was also negligent. However, in both instances the negligence was determined not to be the proximate cause of any damage to the child. The jury found the second physician not guilty of any acts of negligence with which he was charged.

With respect to the allegation of negligence of the first physician's failure to refer the child to a specialist, the court held that adequate testimony showed that the doctor did not suspect the presence of a chicken bone in the child's lung. He found no evidence of such condition upon examination; therefore, the jury was within its prerogative to find that this was not a negligent act.

Concerning the failure to inform the plaintiff of the possibility of the bone's being in the child's lung, the court said that no expert testimony confirmed that a doctor should give such advice. In addition, it was not established that the plaintiff would have followed a different course of action

had she been informed of the possibility. Since the doctors were aware of the possibility, the treatment prescribed by them would not have been affected had the plaintiff been more fully informed. Therefore, the jury's holding was merited.

The court upheld the jury's findings that the first physician's failure to perform a bronchoscopy or to refer the child to a specialist was not negligent. Evidence was presented that general practitioners ordinarily do not perform this procedure and that this doctor did not consider the procedure necessary. There was no evidence that a doctor should carry out the procedure under the circumstances then known to that physician.

In view of the evidence that there is not sufficient calcium density in a chicken bone for it to show up well on x-rays, the court said the failure of the first physician defendant to x-ray the child cannot be held as a matter of law to be the proximate cause of damage to him.

The appellate court said in view of the fact that the second defendant testified that he did not consider himself qualified to do a bronchoscopy, his failure to attempt the procedure could not be held to be negligence.

The plaintiff argued that the second defendant was also negligent in that his duty to treat the child continued to the date a bronchoscopic examination could have been performed. The court held that this was not established by the evidence. It appeared that the doctor terminated the doctor-patient relationship immediately after the child was admitted to the hospital. The court said if such termination was actionable and resulted in damage, it was the burden of the plaintiff to request issues establishing these facts. The negative answers made by the jury to these issues were fully supported by the evidence.

The issue of proximate cause was important in this case. The proximate cause of an event is generally defined as that which, in natural and continuous sequence, unbroken by any efficient, intervening cause produces the injury, and without which the injury would not have occurred. It is also said to be the act of omission occurring or concurring with another, without the occurrence of which the injury would not have been inflicted and the cause of an injury to which legal liability attaches.[2]

SUMMARY: This case points out again that to obtain a judgment against a physician for malpractice, the patient must present evidence and proof that 1) the physician owed a duty to the patient, 2) the physician was derelict in that duty, 3) such failure or breach was a direct cause (proximate cause) of the injury, and 4) damages to the patient resulted from these acts. Here the plaintiff did not carry forward the burden on all of these elements and even though negligence was proven in some instances, the important element of proximate cause defeated recovery by the plaintiff against the physician defendants.

TMA Office of General Counsel
Ace Pickens

1. *Traylor v Goulding, et al,* 497 SW2d 468 (Tex Civ App 1973) NRE.
2. *Kirkpatrick v Neal,* 153 SW2d 519 (Tex Civ App err ref w o m); 40 Tex Jur 2d Negligence Sec 178.

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Medical Newsmakers

Dr. Knight

DR. SAM A. NIXON, family practitioner from Floresville, has been selected as vice-speaker of the Congress of Delegates of the American Academy of Family Physicians.

Recently elected to the Governing Council of the American School Health Association is Dr. JOHN P. McGOVERN, Houston allergist.

Effective Nov 1, JACK A. RODGERS was named associate director of the San Antonio Medical Foundation. The foundation is the nonprofit developer of the 683 acre South Texas Medical Center.

DAVID N. SCOULAR has been appointed director of planning, office of the executive vice president of Baylor College of Medicine. His responsibilities include the development of more systematic and comprehensive planning to improve methods of policy development.

The following new officers were elected this fall by the Texas Pediatric Society: DR. GEORGE R. BRANCH, Dallas, president; DR. P. CLIFT PRICE, Austin, president-elect; DR. ROBERT M. ARLEDGE, San Angelo, vice president; DR. MILTON W. TALBOT, Austin, secretary; DR. GEORGE E. FELKNOR, Baytown, treasurer; DR. LAURANCE N. NICKEY, El Paso, chairman, District 4; and DR. HERMAN O. KREMPIN, Dallas, chairman, District 2.

DR. EDWARD N. BRANDT, JR., dean of medicine at The University of Texas Medical Branch, has been named editor of the new journal, *Continuing Education for the Family Physician.* The journal is circulated to 62,000 family and general practitioners in the United States and Canada.

DR. LEE E. EDENS, Austin dermatologist, was one of four honorees to receive a citation of merit from the Alumni Association of Southwestern University at an October reception and dinner.

The American Society of Anesthesiologists recently re-elected DR. GERALD G. MULLIKIN of Longview as assistant secretary of the 13,000 member organization.

DR. JAMES A. KNIGHT, psychiatrist and former Navy chaplain, has been named dean of medicine at Texas A&M University. For the past ten years, Dr. Knight has been associate dean of Tulane University School of Medicine. Dr. Knight will head the university's cooperative program with Baylor College of Medicine, the Veterans Administration, and Scott and White Clinic.

A recognition dinner honoring MILLARD J. HEATH, Dallas County Medical Society exective officer, was held Oct 25 at the Dallas Statler Hilton Hotel. One of the earliest county medical society executives in the country, Mr. Heath will retire Dec 31 having served the medical society for 30 years. His career, dating from the 1930's, covers a wide range of service-oriented activities. Among his many honors are the Dallas Southern Clinical Society's Marchman Award, the Dallas Press Club's Headliner selection, and the establishment by DCMS of a trust fund in his name for scholarships presented to allied health students. During the recognition dinner, Mr. Heath was cited for his accomplishments by representatives of medicine, hospitals, organizations, and the community.

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Medicine in literature

The Fetus and Newly Born Infant, Roger E Stevenson, MD, St Louis, C V Mosby Co, 1973, 391 pp, 76 illus, $30.25.

This rather timely book is devoted to a summary of the pre-natal factors that can adversely influence fetal development. Dr. Stevenson has grouped these into five different catagories; immunological, chemical, infections, pre-natal nutrition, and a fifth catagory which includes the effects of radiation, oxygen, malignant disease and finally maternal age. I found the monograph to be informative, concisely and clearly written. This book will undoubtedly be very well received by the medical profession.

CLIFFORD THORNE, MD
Austin

Surgery of Repair as Applied To Hand Injuries, ed 4, B K Rank, A R Wakefield, and J T Hueston, 390 pp, illus, Edinburgh and London, Churchill Livingstone, 1973, $14.81.

This is not intended to be a book which details all of hand surgery. Closed fractures, congenital anomalies, Dupuytren's disease are not included. The subject is repair of trauma to the hand.
The book is divided into four parts. The first has excellent sections on surgical anatomy of the hand and the examination and appraisal of the recently injured hand. Part two takes up primary treatment down to the point of exactly how one should cleanse an injured part and use a tourniquet. The third includes the intermediate treatment of the injured hand with a section on wound closure and the problems of joint contractures. The fourth part of this book has sections on scar disabilities and secondary repair of deep structures, which in my opinion are overly sophisticated and insufficiently detailed in a book which also has parts so elementary as to how to cleanse an injured hand.
The work should be useful to practitioners and house officers who treat hand injuries. I do not believe the book to be useful for reference, but rather should be read to acquaint one with the experience of three leaders in the field of hand surgery. The most excellent style permits complete perusal without soporific effect.

MORTON H. LEONARD, MD
El Paso

IN THE TMA LIBRARY

American Hospital Association: *The Management of Hospital Employee Productivity: An Introductory Handbook,* Chicago, American Hospital Association, 1973.

Bach George R, Goldberg Herb: *Creative Aggression,* Garden City, Doubleday & Co, 1974.

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Zacharin Robert Fyfe: *Stress Incontinence of Urine,* New York, Harper & Row, 1972.

Zorab PA: *Scoliosis and Growth,* Baltimore, Williams & Wilkins, 1971.

"Madam, I told your husband to go to physical therapy. I didn't even mention a massage parlor."

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

W P STANTON
San Antonio, 1909-1974

P CRUMPLER JR
Bowie, 1913-1974

E A EHLERT JR
Victoria, 1909-1974

J A RISSER
Bonham, 1916-1974

J I WOMACK
Dallas, 1918-1974

L M SALINGER
Brownsville, 1926-1974

G R WRIGHT
Cleburne, 1914-1974

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The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

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Recent deaths

Dr. Stanton

Dr. Crumpler

Dr. W. P. Stanton

William Paul Stanton, San Antonio surgeon since 1937, died Feb 21, 1974. He was 65 years old.

A native of Kansas, Dr. Stanton received a BS degree from Creighton University, Omaha, Neb, and an MD degree from Creighton University School of Medicine, Omaha. He completed an externship at Jennie Edmundson Memorial Hospital, Council Bluffs, Iowa; an internship at Santa Rosa Medical Center, San Antonio; and a surgical residency at King's County Hospital Center, Brooklyn, NY. Following the residency, Dr. Stanton returned to San Antonio where he was associated with Dr. James W. Nixon until 1937, when he established a private practice.

Dr. Stanton was in the US Army from 1942 to 1946, serving as a major in the First Auxiliary Surgical Group in the European Theater. Following World War II he completed residencies in surgery and pathology at Santa Clara Hospital in San Jose, California in 1946 and 1947, prior to resuming his practice in San Antonio.

In San Antonio Dr. Stanton was a member of the staffs of Nix Memorial Hospital, Baptist Memorial Hospital, Southwest Texas Methodist Hospital, Lackland Air Force Hospital and Santa Rosa Medical Center. He was also an associate professor of surgery at The University of Texas Medical School at San Antonio. Dr. Stanton was a member of Southwestern Surgical Congress, Bexar County Medical Society, Texas Medical Association, and American Medical Association. He was also certified by American Board of Surgery and was a Fellow of the American College of Surgeons.

Dr. Stanton is survived by two sisters, Mrs. Wilbur R. Jones, Ardmore, Okla, and Mrs. William H. Farrar, Arkansas City, Kan, and a brother, Robert J. Stanton of Tulsa, Okla.

Dr. P. Crumpler, Jr.

Dr. Prentice Crumpler, Jr., Bowie family physician since 1946, died Aug 21, 1974, of a myocardial infarction.

Born in 1913, Dr. Crumpler attended The University of Texas at Austin and was graduated from The University of Texas Medical Branch at Galveston with an MD degree in 1936. Following an internship at Scott and White Memorial Hospital, Temple, he established a medical practice in Temple where he remained for nine years before moving to Bowie.

Dr. Crumpler was a member of Clay-Montague-Wise County Medical Society, Texas Medical Association, American Medical Association, and American College of Surgeons.

Survivors are his wife, Helen Gass Crumpler, Bowie; two daughters, Mrs. Joyce Hutchens, Irving, and Mrs. Charlotte Taylor, Va'encia, Calif; a son, Charles Prentice Crumpler, Dallas; a brother, Dr. Hulen P. Crumpler, Bowie; and six grandchildren.

Dr. E. A. Ehlert, Jr.

Dr. Edward A. Ehlert, Jr., died Aug 4, 1974, in Detar Hospital, Victoria. The 65-year-old physician had practiced ophthalmology and otolaryngology in Victoria since 1940.

Dr. Ehlert received a BS degree from Texas A & M University, College Station, and earned an MD degree from The University of Texas Medical Branch at Galveston. He completed a one-year internship at Hotel Dieu Hospital, Beaumont, and a four-year residency at the San Antonio State Hospital, San Antonio. He also studied at New York Polyclinic Hospital and Medical School, New York City, for one year prior to moving to Victoria. He continued his medi-

cal practice until 1973 when he retired due to illness.
Dr. Ehlert was a member of Victoria-Calhoun-Goliad County Medical Society, Texas Medical Association, and American Medical Association.
He is survived by his wife, Billie Clanton Ehlert; two sisters, Mrs. Henrietta McCall, Victoria, and Mrs. Emma Seeker, Brenham; a niece and a nephew.

Dr. J. A. Risser
Bonham physician, Dr. Joe Albert Risser, died Aug 19, 1974, in a Dallas hospital following a long illness.
Born in Bonham in 1916, Dr. Risser attended The University of Texas at Austin, and was graduated with an MD degree from Tulane University School of Medicine, New Orleans. He was the recipient of the Isidore Dyer Award at Tulane as well as being class valedictorian. He served an internship and residency in pathology at Touro Infirmary, New Orleans, prior to entering the US Army during World War II. He was an epidemiologist for the US Army serving in several areas of Europe where epidemics or high rates of sickness were occurring to determine if germs were being spread by the enemy. Upon discharge from the service, Dr. Risser returned to Bonham where he practiced medicine until his illness forced him to retire a few months ago. He was a member of Grayson County Medical Society, Texas Medical Association, American Medical Association, and several fraternal organizations.
Dr. Risser is survived by his wife, Sarah Watson Risser, Bonham; son, Dr. Joe A. Risser, Jr. (DVM), Corpus Christi; daughter, Mrs. Louise Poston, Oklahoma City; stepdaughter, Mrs. Melinda Brooks, Sherman; one brother; and two grandchildren.

Dr. J. I. Womack
Dallas pediatrician, Dr. Jack Irion Womack, died on July 25, 1974. He was 55.
A native of Keenan, Tex., Dr. Womack attended The University of Texas at Austin and received his MD from Baylor College of Medicine when it was located in Dallas. Following an internship at Charity Hospital of Louisiana in New Orleans, he served two residencies and an externship at Children's Medical Center in Dallas. He then served two years in the US Army as attending surgeon at 6th Army Hdqrs, Fort Douglas, Utah, before starting his practice in Dallas in 1947.
Dr. Womack was a member of National Medical Veterans Society, Association of American Medical Colleges, Dallas County Medical Society, Texas Medical Association, American Medical Association, and Texas Pediatric Society, and was a past president of the Dallas Pediatric Society. He was also a member of the rotating teaching staff at The University of Texas Southwestern Medical School at Dallas.
He is survived by his wife, Weta Miller Womack, and three daughters, Ellen Womack, Mrs. Clayton (Martha) Sawyers, and Jacquelyn Womack, all of Dallas.

Dr. Risser

Dr. Salinger

Dr. L. M. Salinger
Brownsville family practitioner, Dr. Leland Morton Salinger, died of an apparent heart attack on July 24, 1974. He was 48 years old.
Dr. Salinger was born in Cleveland, Ohio and was graduated from the Adelbert College, Western Reserve University, of Cleveland with a BS degree. He received an MD degree from the Medical School of Western Reserve University, Cleveland. His internship was served at St. Luke's Hospital, and his obstetrical residency at St. Ann Hospital

Dr. Wright

in Cleveland.
A member of Cameron-Willacy County Medical Society, Dr. Salinger also belonged to Valley Chapter, American Academy of Family Physicians, Texas Medical Association, and American Medical Association.
For many years, Dr. Salinger served as the pre-natal clinic doctor at the City-County Health Clinic in Brownsville. He also served on the board and as clinic doctor of Cameron-Willacy Counties Planned Parenthood Association.
Surviving Dr. Salinger are his wife Helen Wyatt Salinger; four sons, Leland M. Salinger, Jr., Joel P. Salinger, Matthew A. Salinger, and Andrew P. Salinger; two daughters, Rebecca L. Salinger and Martha A. Salinger, all of Brownsville; his mother, Mrs. Malcolm D. Salinger, Sr., Charlotte, NC; and two brothers, Malcolm D. Salinger, Jr., Big Rapids, Mich, and Russell C. Salinger, Torrance, Calif.

Dr. G. R. Wright

Cleburne obstetrician-gynecologist, 59-year-old Glenn Randolph Wright, died July 1, 1974. Cause of death was amyotrophic lateral sclerosis.
Born in Beaver, Okla, Dr. Wright was graduated with an AB degree from Nebraska Wesleyan University, Lincoln, Neb. He received his MD degree from the University of Nebraska College of Medicine in Omaha. An internship and residency were served at Harris Hospital, Fort Worth. During World War II, he served as Captain in the US Army in the European Theater. After practicing medicine in Stephenville, Dr. Wright moved to Cleburne where he was associated with the Kimbro Clinic Association until his death.
Dr. Wright served as secretary of Erath-Hood-Somervell County Medical Society and as secretary and president of Johnson County Medical Society. He also belonged to Texas Medical Association, American Medical Association, Texas Association of Obstetricians and Gynecologists, and was a fellow of the American College of Obstetricians and Gynecologists.
Surviving Dr. Wright are his wife, Hazel Darby Wright; a son, Richard Lee Wright, Denton; two daughters, Nancy Lou Wright, Houston, and Mrs. Cynthia Ann Lutrick, Cleburne; a sister, Mrs. Maxine Reid, San Francisco, Calif; a half brother, Jack Bruce McBride of San Francisco, Calif; and one grandson.

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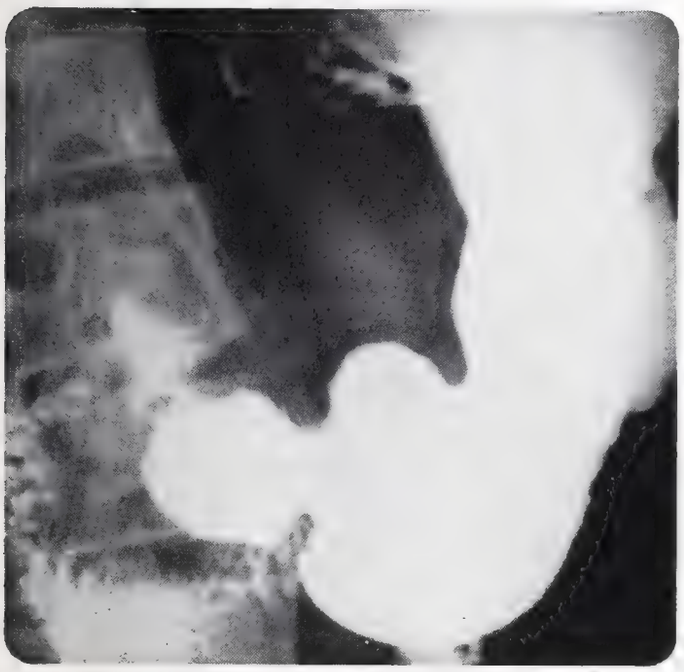
The Upper Functional G.I. Disorder

The Pseudo-ulcer

Ulcer-like symptoms: no G.I. pathology



X-ray demonstrates normal stomach.

The patient is convinced he has an ulcer. However, symptoms are not quite typical, and x-ray findings are negative. These findings and the results of additional diagnostic procedures exclude an organic basis for the patient's complaints. A diagnosis of "upper functional gastrointestinal disorder" is made, which is supported by the fact that episodes of painful symptoms coincide with episodes of excessive anxiety, as indicated by the history.

It may be useful to explain to the patient the mechanism by which emotions upset normal G.I. functioning, resulting in hypersecretion and hypermotility and thus causing such symptoms as nausea and epigastric pain. In upper functional gastrointestinal disorders, counseling by the primary physician can often help the patient understand how excessive anxiety may cause flare-ups of G.I. symptoms.

A disproportionate number of patients seen by the general practitioner suffer from functional disorders, as do more than half of those seen by the gastroenterologist.* Where milder cases may respond to counseling alone, if symptoms are severe and disabling to any degree, a suitable regimen may include medication to reduce the symptoms and the excessive anxiety that often provokes these distressing symptoms.

In these cases, Librax as an adjunct can greatly contribute to the course of therapy. Its dual action can offer relief of both painful symptoms and excessive anxiety, because each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br. The antianxiety action of Librium® (chlordiazepoxide HCl) makes Librax exceptional among drugs for certain gastrointestinal disorders associated with excessive anxiety; the clidinium bromide (Quarzan™) component furnishes dependable antisecretory-antispasmodic action. Dosage is flexible; it may be adjusted according to your patient's requirements within the range of 1 or 2 capsules three or four times daily, up to 8 capsules daily in divided doses. Please consult the complete product information regarding precautions and adverse reactions.

*Rome HP, Brannick TL: Orientation and mechanism of functional disorders; clinicophysiologic correlation, chap. 133, in *Gastroenterology*, edited by Bockus HL. Philadelphia, W.B. Saunders Company, 1965, p. 1116.

An adjunct in anxiety-related upper functional G.I. disorders

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Please see summary of product information on following page.

An adjunct in anxiety-related upper functional G.I. disorders

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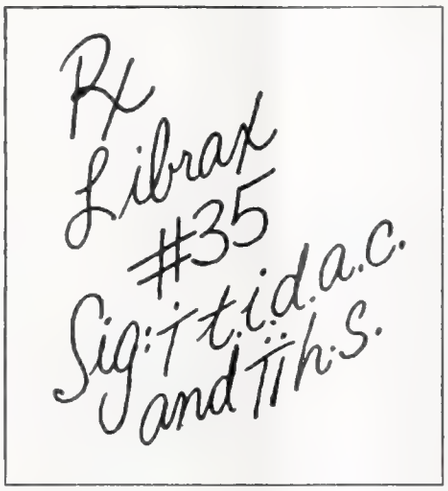

Initial therapy

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Follow-up therapy

Follow-up therapy with a prescription for 2 to 3 weeks' medication usually helps maintain patient gains.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Symptomatic relief of hypersecretion, hypermotility and anxiety and tension states associated with organic or functional gastrointestinal disorders; and as adjunctive therapy in the management of peptic ulcer, gastritis, duodenitis, irritable bowel syndrome, spastic colitis, and mild ulcerative colitis.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido —all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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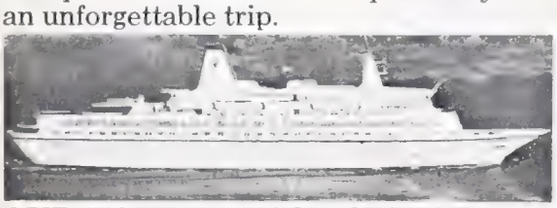

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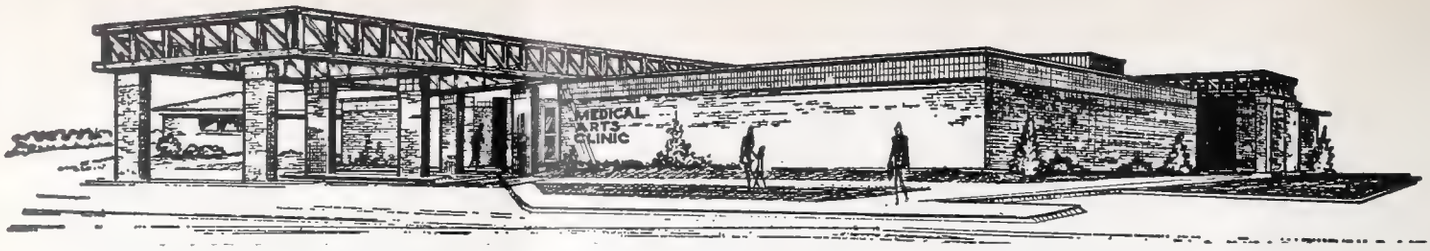

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FAMILY PRACTICE PHYSICIAN NEEDED to join a three man group doing general practice. New community hospital and new clinic building under construction now, modern golf course, large lake, excellent hunting, excellent schools with no busing and no integration problems. 90 minutes from Dallas-Fort Worth. No investment necessary. Salary first year negotiable, with partnership after one or two years if desired. Contact K. J. Wharram, M. D. or A. D. Major, M.D., Nocona, Texas 76255. AC 817-825-3371.

TWO PHYSICIANS NEEDED. FAMILY PRACTICE PHYSICIAN AND INTERNIST needed to join a full time, seven man clinic association group with part time radiologist and clinical pathologist in Clifton, Texas. Located in the heart of Texas, 35 miles NW of Waco, 15 miles from Lake Whitney. Good fishing, excellent hunting, new, recently completed, modern golf course. Excellent schools, churches and growing progressive small town. Closely associated with new 65-bel hospital facility, which is fully accredited by the Joint Commission. Suggest salary at first with partnership in future. Financial terms open. Please contact V. D. Goodall, M.D., Clifton Medical and Surgical Clinic Association, Clifton, Texas 76634. Telephone 675-8621 or 675-3113.

WANTED: PHYSICIAN TO JOIN GENERAL SURGEON AND GENERAL PRACTITIONER in small town. Privately owned clinic and hospital combination. Guaranteed salary. Prefer family practice specialist. For additional information, please contact M. A. Childress, M.D., P.O. Box 289, Goldthwaite, Texas 76844; Phone 915-648-2212.

FAMILY PRACTICE, with two other family practitioners. Two hospitals with 550 beds within fifteen minute, 4 lane drive. Progressive Central Texas community of 4,350 population. Community void of problems of large cities. 15 miles to Waco (pop. 102,000); 100 miles to Dallas, Fort Worth, and Austin. Good schools (no bussing), churches, country club with 18 hole golf course, three nearby lakes, recreational facilities. An excellent place to raise a family. New associate would be on salary first year; partnership in association later. Exchange calls and weekends with two other physicians. Contact R. Dean Elliott, Administrator, 414 Johnson Drive, McGregor, Texas 76657. AC817-840-3281.

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from big city problems. Call collect Dr. Preston McCall at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

TEXAS, SAN ANTONIO: EMERGENCY PHYSICIANS NEEDED for new group serving three hospitals; 65,000 ER visits a year. Fee-for-service. Departmental status. Past earning history $45,000 plus additional income for optional participation in employee health service. Write or call George Pruett, M.D., 5239 Round Table, San Antonio, Texas 78218. Telephone 512-653-3612.

UNIQUE CONCEPT: Two family MDs to start in June-July to work nine months rotating schedule, then off three months with salary. Gulf Coast, beaches, deep sea fishing, good attached hospital, salary open first year. Write, call, or come by: Medical Arts Clinic, 1711 West Wheeler, Aransas Pass, Texas 78336; AC512-758-5326.

WE HAVE EXCELLENT OPPORTUNITY in area for GP who wants to do routine surgery, or surgeon who would supplement with FP. Well-established, fully-manned hospital in town. Other physicians would welcome one or two new men. Relaxed life style plus career opportunity for you and your family. More particulars from H. A. Raesener, Jr. (Administrator), Llano, Texas 78643; 915-247-5040.

ENNIS, ELLIS COUNTY: OPPORTUNITY for family practice in community of 12,000, serving a trade area of 20,000. Five physicians in town, one hospital, 55 beds, open staff. 35 miles from Dallas. No weekend E. R. call, covered by hospital based physicians. City of Ennis employing physicians on contract basis, office supplied, nurse supplied, billing provided, group hospitalization, paid vacation, etc. Contact Ronald Hudspeth, Administrator, Ennis Municipal Hospital, 803 West Lampasas, Ennis, Texas 75119.

PEDIATRICIAN TO JOIN three board certified pediatric group in professional association; liberal salary and fringe benefits; new pediatric center building to be completed in October is located next to teaching Children's Hospital; beautiful city by the sea, warm year round climate, population 250,000. For details write Box 3154, Corpus Christi, Texas 78404.

SAN JACINTO METHODIST HOSPITAL, BAYTOWN, TEXAS. Physicians solo or group practice; family practice, orthopedics, psychiatry, pediatrics, anesthesiology, etc. Home of Exxon, U.S. Steel, major expansions underway. High income. On bay near Houston. Outstanding schools, colleges. Contact Administrator, 1101 Decker Drive, Baytown, Texas 77520; 713-427-0411, ext. 234.

INTERNIST-GENERAL PRACTITIONER: Clinic, including lab and x-ray. Join surgeon and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Association, 9801 Katy Freeway, Houston, Texas 77024. Phone 713-468-4338.

PHYSICIANS WANTED for care of mentally retarded at Travis State School, Austin, Texas 78767. Salary attractive. Write or phone the Superintendent or Medical Director, P.O. Box 430, Austin, Texas 78767; Phone 512-926-2410. An equal opportunity employer.

PHYSICIAN OWNED AND MANAGED HOSPITAL, 158 beds, has immediate opening for two general practitioners who are interested in practicing in a physician oriented community with guaranteed success. These are private practice opportunities. Only two offices remaining in a new and beautiful medical complex next to the hospital. The hospital will insure your medical success by offering a six months cash guarantee of $5,000 per month in addition to six months free rent. This is a rare opportunity for general practice physicians who would like to work in a GP community. Pasadena, Texas is a progressive city of 100,000 located as a suburb of Houston, Texas, near the Manned Space Craft Center; medical community enjoys high per capita earnings, open staff policies, and unlimited medical opportunities. For additional information write or call Richard Fly, Pasadena General Hospital, 1004 Seymour, Pasadena, Texas 77506. Phone 713-473-1771.

FP OR IM TO JOIN THREE MAN GROUP. Investigate facilities, compatability, economics and environment personally with wife and family. Community Health Center, P.O. Box 672, Trinity, Texas. 713-594-3595 for Barnes, Colwell or Cook.

NEEDED IMMEDIATELY: FAMILY PRACTITIONER. The community has three family practitioners, one will retire shortly. The community and surrounding counties serve over 15,000. The hospital has 77 beds and JCAH approved. The medical community is harmonious and stable. Contact: Edward G. Clark, 713-348-2631, Madison County Hospital, Box 698, Madisonville, Texas 77864.

SOLO OR GROUP PRACTICE—on call every 5th night and every 5th weekend. Contact: Byron Terry, P.O. Box 247, Hughes Springs, Texas 75656, phone 214-639-2577 day, 214-639-2738 night; or Victor L. Harville, M.D., phone 214-645-2246 office, 214-656-2561 home.

FAMILY PRACTICE—OR SPECIALIST willing to practice some family medicine. Solo or associate with established doctor. Excellent potential of establishing as large a practice as desired. New, well-equipped, progressive hospital. Can assure excellent income. Ample office space available. Will consider constructing new clinic. Please reply to Ad-524, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $22,500 to $29,500 with usual state benefits. Texas license or reciprocity required. Contact the Recruiting Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity/affirmative action employer.

CHILD PSYCHIATRY RESIDENCY may be taken before or after adult psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psycho-pharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities, and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed inpatient unit for children. Liaison with graduate schools, medical school, and community programs. Stipends: First year, $13,000; second year, $14,000; third year, $15,000; fourth year, $16,000. Contact Anthony P. Rousos, M.D., Director of Training & Research, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

PSYCHIATRIC RESIDENCY in approved 3-year program. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty and programs. Stipends with Texas license are $13,000, $14,000, and $15,000 per year. In addition, now offering residency in child psychiatry. For full information write to: Anthony P. Rousos, M.D., Director of Training & Research, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

GENERAL PRACTITIONER to join two GP's in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic adjacent to 36 bed hospital recently remodeled. Salary open, partnership available after trial period. Contact Ad-503, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON WANTED, Fort Worth, Texas to associate with board certified orthopedist. Please contact Arthur Lorber, M.D., 515 South Summit, Fort Worth, Texas 76104; 817-336-4019.

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WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City population, 25,000. Drawing area, 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities, Good schools and churches. Ideal family city. Please reply to Charles D. McMillan, M.D., 170 8th Street, S.E., Paris, Texas 75460.

OB-GYN PHYSICIAN NEEDED for town of 7,500 population, trade area 40-45M. Eight family practitioners in community desire this specialty. Office space available. Fully accredited 45 bed hospital, located in southeast Texas, 45 minutes from Houston and Beaumont. Coverage available. Contact Jack M. Harrell, Administrator, Yettie Kersting Memorial Hospital, Liberty, Texas 77575; 713-336-7316.

INTERNIST—Board certified or eligible wanted to join 12 physician multi-specialty group; city of 20,000 within Dallas-Fort Worth Metroplex. Excellent hospital and community facilities. Financial arrangements dependent on ability, training and boards. Send resume to Ad-533, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WANTED: White Oak, Texas. Growing city of 2500—convenient to Longview or Gladewater Hospitals. Building sites available and construction contractors ready to build to specifications. Local and favorable financing available. Contact J. H. Stewman, P.O. Box 501, White Oak, Texas 75693 or call 214-759-6461.

SWEETWATER. TWO GENERAL FAMILY PRACTICES, solo or associate. $5,000 per month minimum collection guarantee beginning first month. Not a loan. No investment. Minimum practice expense first year. No crime, no pollution. Good schools for your children. Oil and cattle land available for investing your financial surplus. New hospital-medical center complex by summer 1975. Not an employment agency. Call or write with CV to Sanford Smith, Director of Physician Planning, Hospital Management Corporation, 12421 East Freeway, P.O. Box 9836, Houston, Texas 77015. 713-455-1761.

WICHITA FALLS—A BOOMING TOWN with three industrial plants under construction, each over $50,000,000. Suburban clinic with full facilities and two busy family physicians with room for one or two more, and land for expansion. Two major, open staff hospitals. Income guaranteed for associate in family practice; or will lease space to primary care physician of different specialty and funnel our many excess patients to him. Must have good medical background and references. Contact University Park Clinic, 4111 Call Field Road, Wichita Falls, Texas 75308. Phone number 817-692-2024.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. 190 nursing home beds. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860.

BOARD ELIGIBLE PSYCHIATRIST for out-patient clinic. General physician or physician with special interest in mental retardation. Liberal vacation and sick leave, partial payment for excellent hospitalization and life insurance, affiliation with Texas Tech University Medical School. Must have Texas license. Call or write Preston Harrison, M.D., Superintendent, P.O. Box 231, Big Spring, Tx 79720, 915-267-8216.

GENERAL SURGEON WANTED FOR PRIVATE PRACTICE as an associate or a partner with an established board certified general surgeon in a community of over 15,000 people near Dallas. Modern two-surgeon office building across the street from JCAH accredited hospital. Contact Ad-535, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTICE WITH GENERAL SURGERY—Solo or join 2 GPs; minimum guarantee; office space available. Hunting and fishing paradise. Excellent schools and churches. Near Houston. Please reply to Ad-536, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

MD—GP OR FP URGENTLY NEEDED in Groesbeck, Texas, to eventually enter partnership with two older MDs, one who plans to retire shortly. Progressive county seat, town of 2,500 people with large trade territory. Multiple medium size industries. Bank assets over 13 million dollars, cattle and gas country. New 38 bed hospital. Excellent, easily available consultants; only 40 minutes from Waco, Texas. Adequate time for recreation, rest and vacation. Please contact Groesbeck Clinic, P.O. Box 470, Groesbeck, Texas 76642.

OCCUPATIONAL MEDICINE-PRIMARY CARE PHYSICIAN, board certified or qualified in internal medicine, occupational, preventive, or aviation medicine, for primary care practice in established satellite clinic with numerous company accounts, university affiliation and proposed prepay health program. (No dual compensation involved for retired.) Excellent beginning salary and fringe benefits. Adjacent Texas Medical Center. Write or call J. A. Bakken, Administrator, Kelsey-Seybold Clinic, 6624 Fannin, Houston, Texas 77025. Phone 713-526-2671.

PHYSICIANS WANTED: OB-GYN, one or two men. Now or July, 1975. Salary or partnership or association with OB-GYN who is solo. Call me if seriously interested in metropolitan West Texas area with excellent opportunity. (806) 795-5052.

WANTED: SPANISH SPEAKING GENERAL PRACTITIONER needed to share work load in busy office. Family, general, industrial medicine practice. Rotating night calls. $36,000.00 starting salary, no investment required, liberal Professional Association fringe benefits. Call collect. H. Pena, M.D., North Main Medical & Surgical Clinic, Assoc., 3301 North Main, Fort Worth, Texas 76106, (817) 626-6781 or 626-4921.

SEEKING PHYSICIAN: This 50 bed, fully JCHA accredited hospital is urgently in need of a specialist in obstetrics and gynecology. This is a wonderful opportunity with an excellent salary and fringe benefits. Group practice set up. Contact Administrator, Hall-Bennett Memorial Hospital, Big Spring, Texas 79720, or call collect (915) 267-7411 for details.

FAMILY PRACTITIONER WANTED—New office space in 7 man group located in the Dallas-Fort Worth Metroplex adjacent to 210 bed hospital. Guaranteed income — future partnership. Write or call Ruth Harkey, Business Manager, 101 South O'Connor Road, Irving, Texas 75060. (214) 254-6153.

GENERAL PRACTICE—STAFF PHYSICIANS NEEDED for progressive 1,600 resident state school for the mentally retarded. Possession of legal requirements for practice of medicine in Texas required. Competitive salary. Excellent fringe benefits. Pleasant climate. Write or call Personnel Office, Austin State School, Box 1269, Austin, Texas 78767; (512) 454-4731. An equal employment opportunity employer.

HEMATOLOGIST-ONCOLOGIST to join successful, established, three-man partnership. Practice limited to specialty by physician referral. We want someone amiable, board eligible and who wants to live and practice in Dallas. Send resume to James T. Wheeler, M.D., 824 Medical Arts Building, Dallas, Texas 75201.

MEDICAL OFFICER POSITION VACANCIES (Part time and full time) Kelly Air Force Base. Opportunity to practice in a modern outpatient facility in San Antonio, Texas. Duties include general outpatient and/or occupational medicine duties. Salary range $23,998 per annum to $27,632 per annum (compensation in line with personal qualifications). No limitation for retired military physicians. Medical licensure in any State acceptable. Texas license not a prerequisite. All interested applicants encouraged to apply. Contact Colonel Louis F. Johnson, Jr., or Major Philip E. Rutledge, USAF Clinic, Kelly AFB Texas 78241. Telephone (512) 925-7127, 925-7128 or 925-7129.

INTERNISTS, ORTHOPEDISTS, FAMILY PRACTITIONERS, Pediatricians, Otolaryngologists and Obstetrician-Gynecologists. Private practices in Houston, Dallas, Hillsboro, Sweetwater, Tomball, Conroe and Baytown. Not an employment agency. We will put you in touch with physicians requesting these fields as badly needed in their community. Group, associate and solo openings. No cost or obligation to interested or requesting physicians. Write with C.V. and preferences to Sanford Smith, Director of Physician Planning, Hospital Management Corporation, 12421 East Freeway, P.O. Box 9836, Houston, Texas 77015. (713) 455-1761.

Situations Wanted

OPHTHALMOLOGIST—31, married, completing university residency, June 1975. Desire solo, associate, or group opportunity in Houston area. Ronald D. Cox, M.D., 687 Watersedge Drive, Ann Arbor, Michigan 48105.

SITUATION WANTED: EXECUTIVE MEDICINE, MEDICAL DIRECTOR: Board qualified general surgeon MSS, MHA, nominee ACHA, 7 years medical director/commander military hospitals, 10 years chief, department of surgery. Special training in medical audit/accreditation surveys, PSRO and medical staff organization/committees. Personal interviews, curriculum vitae on request. Available Sept. 1, 1975. Please reply to Ad-527, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, BOARD ELIGIBLE, wants to relocate in 5,000-10,000 population town with good hospital. Prefer solo practice. Good references. Available immediately. Please reply to Ad-498, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PHYSICIAN, TAFP member, 1969 graduate with three years general family practice experience desires to relocate to Dallas area (80 mile radius), within 12-24 months. Possibly associate with other physician or small group. Please reply to Ad-529, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SITUATION WANTED: MEDICAL DIRECTORSHIP OR ADMINISTRATIVE position wanted by certified surgeon. Age 49; private practice experience; licensed in Texas; married with family; available for personal interview; can furnish excellent professional and personal references. Plase reply to Ad-534, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

LABORATORY MEDICINE — 33, available July, 1975. University trained. Texas license. Also would like to continue interest in emergency medicine. Robert C. McDaniel, M.D., 4949 Barnes Hospital Plaza, St. Louis, Missouri 63110.

INTERNIST-ENDOCRINOLOGIST, 32 years old, ABIM certified. Wish to join group practice in Central or Northeast Texas. Experienced nuclear medicine. Military obligation completed summer 1975. Write: David B. Kocher, M.D., 470 Sandstone Drive, Vacaville, California 95688.

SEEKING PEDIATRIC POSITION, desire group, partnership or solo practice in Texas. Texas license no. E3047. Male physician, 40, Chinese, available upon completion of pediatric training program in July 1975 (Board eligible). Please contact AD-539, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

FOR SALE: MEDICAL EQUIPMENT IN GOOD SHAPE. Mattern x-ray, examining table, instruments, microscopes, Bird machine, small sterilizer, cutlery machine, ultra-sonar and diathermy machines, instrument cabinets, adjustable stainless steel tables, developing tank, x-ray hangers, view box, etc. Please contact Mrs. J. F. Gipson, P.O. Box 1449, Fort Stockton, Texas.

ARLINGTON — in the middle of America's future and present. Two thousand feet of new modern office facilities available October for one or two professional offices in a highly desirable medical-dental area. Ideal location for GP or specialist. Tom Clayton, D.D.S., 1007 West Mitchell Street, Arlington, Texas 76013. Phone (817) 460-0121, (817) 274-4707.

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy, laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

FOR RENT: HILL COUNTRY RETREAT. Modern furnished cabin over-looking beautiful Llano River. Located on private ranch with miles of undeveloped river frontage. Fishing and some hunting available. The perfect place to escape the city or weekends. See to appreciate. Mrs. Eugene Zesch, Mason, Texas. (915) 347-5531.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counselling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

MULTI-SPECIALTY CLINIC

Soon to be in new clinic building adjacent to new hospital. Fringe benefits; good climate; a good place to live and raise a family. Rapid advancement to full association. Seeking physicians in the following specialties:

Diagnostic Radiologist and Nuclear Medicine / General Internist / Internists with subspecialty in pulmonary disease, gastroenterology, rheumatology, cardiology / OB-GYN / Ophthalmology / Orthopedic Surgery / Anesthesiology / Family Practice

For additional information contact:
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Malone and Hogan Clinic, An Association
901 Main Street, Big Spring, Texas 79720
AC 915 267-6361

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Advertising Directory

Air National Transportation Service, Inc.	99
Beverly Hills Hospital and Clinic	109
Blue Cross-Blue Shield of Texas	30-31
Boehringer Ingelheim Ltd.	10-11
Brown Schools	34
Burroughs Wellcome Company	35
Comatic Laboratories, Inc.	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
The Diagnostic Clinic of San Antonio, P.A.	73
Dorsey Laboratories	18
Gulfstream Condominium	34
Hair Transplant Symposium and Workshop	34
Heritage Company	26
Ives Laboratories	25
Kelsey-Seybold Clinic	55
Eli Lilly and Company	36
Loomis-Sayles Funds	73
Malone and Hogan Clinic, Big Spring	127
The Martin X-Ray and Radium Clinic	130
Medical Arts Clinic of Corsicana	114
The Medical Protective Company	91
Medicenter Psychiatric Hospital	91
The Pharmaceutical Manufacturers Association	28-29
Pilgrim Realty	127
Poythress	21
T. Rowe Price Growth Stock Fund, Inc.	34
The Prudential Insurance Company of America	9
Psychiatric Institute of Fort Worth	16
Puerto Del Padre	22
Ben H. Quinney, M.D.	127
Radiology Associates of Fort Worth	114
Roche Laboratories	1-2, 92-93, 110-112
Scott and White Clinic	Back Cover
Seaview Hospital	4
Starlite Village Hospital	130
Texas International Airlines	16
Texas Medical Association	
South American Adventure	113
Automobile Leasing Program	131
Memorial Library Fund	105
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	114
Wallace Laboratories	26-27
Warner-Chilcott	4-5
Wichita Falls Clinic	130

Physicians' Directory	115-124
Classified Advertisements	125-127

Editorials

USE AVAILABLE TESTS TO SCREEN FOR CANCER

For the first time in more than ten years, the cure rate for cancer has improved. The cure rate had been fairly stationary at 33%, but in the last review it was 40%. The possibility of cure with current methods had been static at 50%; now it is being suggested that we should be curing at least 62% of all cancer patients with techniques available today.

What could be the cause of this increase in cure rate and possibility of cure? We would like to feel that the educational programs of our medical schools, medical societies, the American Cancer Society, the National Cancer Institute, and related organizations have helped. We know that some of the screening tests for cancer have helped to eradicate certain cancers. For example, the Papanicolaou test has cut down the number of invasive cancers of the cervix. It is sad that 17,000 women still die each year from a disease that could be completely eradicated by prevention and early diagnosis. Other tests that are becoming more popular are the various screening procedures for breast tumors. These include mammography, xero-mammography, and thermography. The most likely discoverer of breat cancer is the patient herself. A recent Gallup poll showed that the main reason women examine their breasts is because their own physicians advise them to do so. It further showed that local physicians have done a poor job in encouraging breast self-examination. With earlier diagnosis and treatment of breast cancer, the cure rate could be improved.

There is another group of examinations which could help in detecting cancer of the colon. In the past, we occasionally have tested people for occult blood in the stool. Less frequently, the patient will have a sigmoidoscopic examination and barium enema. We now have another test that finally has been approved by the Food and Drug Administration. This is the carcino-embryonic antigen test.

Whereas it is sometimes very distasteful for a patient to bring in a stool sample, we have been provided with a simple test for blood in the stool by the use of the hemoccult slides. The patient is instructed to go on a diet low in meat and high in roughage, and then bring three stool specimens which can be obtained easily by placing the toilet tissue upon one of the hemoccult slides. In the physician's office, blood in the stool can be detected rather easily. This is an inexpensive, efficient test, and reports from all over the country have shown that many early cancers of the colon and rectum have been picked up by this method.

Isn't it about time that the physicians start using these diagnostic and screening procedures? We would like to celebrate the 200th anniversary of our country in 1976 by finding the cause and cure of cancer. If we use the screening tests, we could easily increase the cure rate to 50% soon!

Billie L. Aronoff, MD, Dallas,
Consultant,
TMA Committee on Cancer.

MAKE FRIENDS, NOT LAWSUITS

There is little doubt that America is experiencing deep waves of criticism. Individuals and groups are voicing their unhappiness about life in general and many things in particular. Here in the United States, we read in our papers and magazines, and listen to and watch TV reports about what is wrong with the United States. It would be hard to find any segment of our society that is not under fire: insurance; banks; auto; steel; oil; tire; real estate; lawyers; our national, state, and local governments; schools; churches. And, yes, you in the health professions are getting your share. Daily we see individuals and organized groups trying to cure all our ills and man's imperfections by "cure all" legislation. You and I know that laws as such do not and will not work. The change must come from within, especially in our human relations. We can use more friends. Our courts are not filled with friend suing friend. Friends work with each other in spite of differences.

Surely the medical profession has one of the best opportunities to have great person-to-person relationships. Of course, it must be experienced office by office, person by person. The American Medical Association and the Texas Medical Association can't do it for you. In the medical profession you must work harder because a person is much more sensitive as a patient than he is as a customer. It is easier to please an individual when he is seeking to buy a car or a TV, for he is satisfying pleasure from these. Medical need is a different story. He does not want, plan, or budget for his illness, nor does he get satisfaction paying for something he did not want. Your human relations are more of a challenge, but they also can be more rewarding. Most people are good people and they can be both patients and friends. It takes the doctor and all his staff to do a good job. Every person can help satisfy some of the basic needs of man by treating and accepting each patient as an important person, showing him that he is respected as an individual, and letting him know you and your staff are concerned.

Here are a few policies every office can adopt to provide the proper attitude toward patients:

Our office will have a warm physical decor.

Every person entering our office will be greeted with a genuine, friendly smile.

We will always remember that every person is important.

We will have a deep interest in and a sincere desire to serve every patient.

We will treat each person as a friend as well as a patient.

If the patient has something to say, we will listen.

We will keep abreast of progress in the medical field and always render the highest professional skill.

With policies like these, can any reasonable patient fail to respond favorably?

William J. Strickler, Austin,
Industrial and Business Training Bureau,
Division of Extension,
The University of Texas at Austin.

Wichita Falls Clinic

501 Midwestern Parkway East, Wichita Falls, Texas 76302

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Did you ever assemble an entire month's mail in a single heap? Few doctors can be away from home long enough to permit such an accumulation, but many are able to contemplate a two-week supply of goodies brought by the postman.

Returning recently from a two-week adventure in the Mediterranean, I was greeted by a veritable mountain of paper completely obscuring the desk top. In disposing of the heap in an orderly fashion, I gave all first-class letters priority and screened them with dispatch. Important communications can be processed in a minimum of time.

The really large portion of a physician's mail consists of magazines, and the great preponderance of these periodicals are of the free, throw-away type. In the past several years these publications, unsolicited for the most part, have propagated like weeds after a spring rain. They cover all possible branches and specialties of medicine, including economics, law, finances, entertainment, travel, sports and still others.

Of all those purported to be scientifically oriented, it is doubtful that any can point to significant medical advances traceable to their efforts. But there are three obvious common denominators found invariably among these ubiquitous journals: They are owned and published by nonmedical people; they have impressive editorial boards and consultants who are physicians; and they devote more space to advertising by drug manufacturers than to professional and scientific information. One of the publications, with a total of 162 pages, contained 100 pages of advertising; another contained 118 advertising pages of a total of 194; and yet another devoted 78 of its 120 pages to advertising. At least three or four of them publish twice monthly, thus placing the unwary, beleaguered doctor in double jeopardy!

One is tempted to speculate on the tremendous amount of profit in owning such ventures, and also on the huge expenditure of pharmaceutical company advertising funds to support them.

Since only a minute percentage of these periodicals could be perused by the recipient in the course of a 24-hour day, it seems a terrible waste of effort and paper to distribute them so widely.

On the other hand, *Texas Medicine* and *JAMA* show a much lower percentage of space occupied by advertising, and their advertisers are of a greater variety, with pharmaceuticals being responsible for slightly more than one-half of the advertising space.

It would appear to be more profitable for the reader to show preference for the long-established scientific journals.

E. W. Schmidt, M.D.

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